REST-JD REPORT

Research on **E**uropean Junior Doctors' **S**atisfaction and Working **T**ime

EJD

STUDY OF WORKING HOURS AND RESTING TIMES OF JUNIOR DOCTORS IN EUROPE

ABSTRACT

This report presents the first Europe-wide study on the working time, rest, and satisfaction of junior doctors. It provides a cross-sectional analysis based on a structured questionnaire self-administered to junior doctors in postgraduate training across 26 European countries. Our findings reveal the widespread prevalence of long working hours and insufficient rest, pointing to a systemic problem in European health systems. Junior doctors reported working longer hours than permitted by their contracts or European regulations, frequent overtime and night shifts, lack of weekly rest, and absence of annual leave. The findings highlight the impact of these conditions on workforce burnout, well-being, attrition and workforce shortages. There is an urgent need for policy reform and effective monitoring at local, national, and European levels to reverse this trend, improve retention and recruitment, and ensure the sustainability of European health systems.

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Index

Executive Summary

Do long hours harm health?

Yes. Robust evidence shows that **working more than 48 hours/week increases the risk of cardiovascular disease, depression, anxiety, burnout, and job dissatisfaction.** The risks rise with every additional hour worked.

Are long working hours detrimental for quality of care and patient safety?

Yes. **Extended shifts (≥24h) and work weeks beyond 50 hours are linked to significantly higher rates of serious medical errors. Sleep deprivation and fatigue** undermine cognitive performance, decision-making, and attention, increasing the risk of diagnostic errors, adverse events, and occupational injuries.

Why focus on junior doctors?

Because they are the **frontline of Europe's workforce crisis**. Long and irregular hours are strongly linked to **burnout, attrition, and poor training quality**. If Europe fails to retain its junior doctors, the **projected shortfall of 600.000 physicians in Europe by 2030** will only worsen.

Is there a European Union law regulating working hours?

Yes. The **European Working Time Directive (EWTD)** sets a **48-hour limit** and minimum rights to rest and leave. But in practice, **compliance is weak.** Oversight is poor, and systemic breaches are reported in most countries.

What does our study show?

Who do we define as a junior doctor?

In this study a junior doctor is defined as a medical graduate who is undergoing post-graduate training in a medical speciality. In some contexts, this group is also referred to as *residents*.

What type of study was conducted?

A **cross-sectional survey** was carried out among junior doctors across **26 European countries**, using a structured online questionnaire on working hours, rest, annual leave, and satisfaction. In total, **6,165 responses** were received, making this the largest study of its kind to date. It is the first Europe-wide assessment of working time and satisfaction, and these findings provide robust evidence that reflects the lived experience of junior doctors in Europe.

How many hours do they actually work?

Junior doctors work an **average of 57 hours per week** – that is **17 hours more than contracted average (40h)** and **9 hours above the EWTD legal limit (48h)**. **Over two-thirds (71%) exceed the 48-hour threshold**, showing a **structural and widespread breach** of the Directive.

- **1 in 5 residents (20%)** report working more than **70 hours/week**, and **1 in 10 (10%)** exceed **80 hours/week.**

- The **longest single shift** had a **median of 24 hours**, far beyond occupational health standards.
- **Nearly 9 in 10 (88%)** report overtime, and over **two-thirds (69%)** of that overtime is **unpaid**.

Do they get enough rest?

No. Residents averaged only **6 rest days per month**; in Greece, Malta, and Latvia as few as **4-5 days**. **35% had no annual leave** of four weeks in the past year. Breaks during long shifts were irregular and insufficient. **This lack of rest drives fatigue, burnout, and higher medical error risk**.

Are they satisfied?

Mostly not.

- **Over half of junior doctors are not positively engaged** with their work: 32% report dissatisfaction, and 23% ambivalence.
- **Work–life balance is the weakest point**: only 1 in 4 are satisfied, while a majority (52%) are dissatisfied.
- **Longer hours drive discontent:** more than 60% of those working >48h/ week are dissatisfied, compared to 26% below the threshold (OR 4.6).
- Dissatisfaction is **highest in surgical specialities** and in countries with the longest hours (e.g. Greece, Malta, Portugal, Italy, Switzerland).

What are the key policy messages?

- **Excessive hours are systemic**: most junior doctors in Europe work beyond legal and safe thresholds.
- **Rest and recovery are insufficient**, compounding risks of burnout and errors.
- **Dissatisfaction is the norm, not the exception**, undermining retention and quality of care.
- **EWTD protections exist on paper but are not enforced** in practice**.**
- **Enforcing and tracking compliance with working time standards is essential** to protect junior doctors, retain the medical workforce, and guarantee safe patient care**.**

What are the necessary measures to be taken?

AT THE EUROPEAN LEVEL

- Develop a **comprehensive European multi-sectorial health workforce strategy,** involving not only health ministries but also labour, education, finance and mobility policies.
- Reaffirm the **EWTD as a quality of care and patient safety standard**, not just a labour right.
- Make **working hours a core health indicator**, linking them to mental health, quality of care, and patient safety; integrate into Eurostat/OECD/ WHO-Europe monitoring.

- Strengthen **comparability and transparency**, publishing regular cross-country data on working hours, rest, and compliance.

AT THE NATIONAL LEVEL

- Enforce the law and treat **EWTD breaches as patient safety violations**, backed by independent inspections.
- Link **funding and accreditation** of training programmes and hospitals to verified compliance with the EWTD.
- Invest in **workforce planning** to reduce systemic reliance on junior doctors' overwork.
- Protect **whistle-blowers** so residents can report unsafe hours without retaliation.

AT THE INSTITUTIONAL AND TRAINING LEVEL

- Design **safe rotas,** transitioning to shifts under 24-hours and ensuring predictable schedules.
- Guarantee **protected rest** (daily, weekly, annual) with proper rest facilities and digital disconnection.
- Prioritise **training and well-being,** with protected teaching time, reduced non-educational overload, and access to occupational health services.

AT THE PATIENT AND CIVIL SOCIETY LEVEL

- Advocate for stricter **EWTD enforcement** and for the development of **guidelines for safe working conditions**.
- Campaign for **safe staffing and rest for doctors as an issue of quality of care and patient safety** in order to increase public support for reforms.

Introduction

Introduction

1. What does the evidence say about the relationship between extended working hours and health, well-being, and quality of care?

PROLONGED WORKING HOURS AND WORKERS' HEALTH

The organisation of working time is one of the most decisive and studied factors shaping professional experience, training quality, and professional well-being. Systematic reviews and large cohort studies consistently demonstrate that long and irregular working hours are associated with adverse health outcomes, particularly regarding mental health and well-being[1]. Evidence indicates a clear dose–response relationship, with risks increasing above 49-55 weekly hours[2]. Extended working time is clearly linked to cardiovascular morbidity[3], disrupted sleep patterns, elevated stress, burnout, depression, anxiety, and diminished job satisfaction[4].

Meta-analyses confirm a moderate but significant association between long working hours and depressive symptoms. Irregular schedules, such as night and weekend work, further exacerbate risks, compounding fatigue and psychological distress[5]. Gender and occupational differences are also evident: women, managers, and non-regular workers tend to be more vulnerable[6,7].

PHYSICIANS AND JUNIOR DOCTORS HEALTH AND WORKING HOURS

Among physicians, and especially junior doctors, the burden of long and irregular working hours is particularly acute. Training often involves extended shifts and on-call duties, sometimes exceeding 80 hours per week, well beyond occupational health standards. These conditions are consistently associated with burnout, depression, anxiety, stress, and reduced job satisfaction[8,9]. The prevalence of depressive symptoms among junior doctors is five- to six-fold higher during training, with those working excessive hours nearly tripling their risk compared to peers working 40-45 hours[10].

Speciality and gender variations are significant: surgeons and anesthesiologists report the highest distress levels, while women consistently show greater vulnerability to burnout and depression[11,12]. The European Working Time Directive has reduced some risks, such as percutaneous injuries and accidents, though evidence of a direct causal effect on mental health remains limited[13]. System-level interventions addressing workload, staffing, and work environment are more effective than individual-focused interventions.

IMPLICATIONS FOR QUALITY OF CARE AND PATIENT SAFETY

The repercussions of excessive working hours extend beyond physician well-being to directly affect healthcare quality and patient safety. Evidence shows that extended shifts (≥24 hours) and work weeks exceeding 50 hours are linked to higher rates of serious medical errors, with reductions in patient mortality observed following implementation of work-hour limits[14,15]. Sleep deprivation and fatigue undermine cognitive performance, attentional capacity, and clinical decision-making, increasing risks of diagnostic errors, adverse events, and occupational injuries[16,17].

Burnout also erodes communication, empathy, and trust in the doctor-patient relationship, diminishing satisfaction for both patients and providers of care[18,19]. Thus, regulating working time is not only a matter of occupational health but also a determinant of quality of care and patient safety and healthcare system sustainability.

IMPLICATIONS FOR POSTGRADUATE TRAINING

Long and irregular working hours during postgraduate medical training impair learning and educational outcomes by inducing sleep deprivation, circadian disruption, and fatigue. These factors reduce working memory, vigilance, and executive function, directly compromising cognitive performance[20-22]. Extended shifts (≥24 hours) and frequent night duties are associated with slower processing speed, diminished attention, and increased impulsivity, all of which undermine the acquisition and retention of clinical knowledge and skills[20-22]. Fatigue and irregular sleep patterns also negatively affect mood, motivation, and readiness to learn, further eroding the quality of training[21].

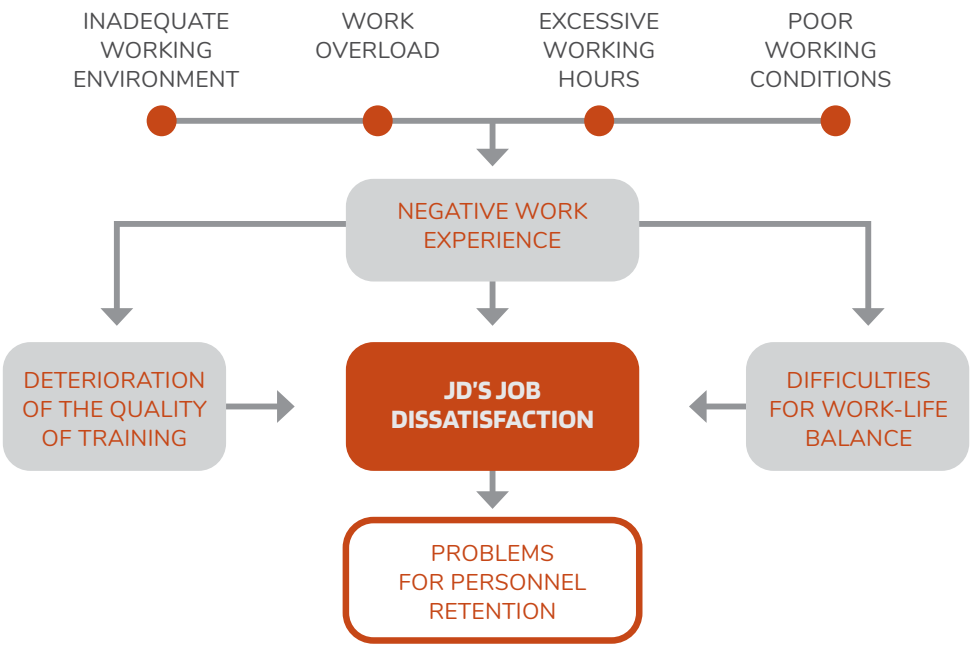
The negative effects are most evident in acute, procedure-heavy specialities' training such as surgery and critical care, where extended and unpredictable schedules are common[23,24]. Internal medicine trainees are also affected, with long and irregular hours linked to reduced satisfaction with education and well-being[25]. Overall, postgraduate training (PGT) trainees in specialities with high-intensity, shift-based work are most vulnerable to impaired learning under extended duty conditions, underscoring the importance of regulating working hours to protect both trainee development and patient care[23-25].

2. Why is it essential to understand and improve junior doctors' working hours?

As we have explored, the organisation of working time is one of the most decisive factors shaping professional experience, training quality, and personal well-being for the general workforce. For junior doctors, this issue is particularly acute. As highlighted in the 2023 European Junior Doctors Association (EJD) report From Transition to Tradition[26], excessive and irregular working hours are directly correlated with perceived job dissatisfaction, burnout,

and attrition, undermining both training quality and workforce retention[Figure 1]. These findings reflect the perceptions of young doctors across Europe and remain critical to understanding the lived experience of the next generation of the medical workforce.

FIGURE 1. **Factors influencing JD dissatisfaction**
ADAPTED FROM EJD REPORT "FROM TRANSITION TO TRADITION" [20]



This problem must also be seen in the context of the ongoing **health workforce crisis in Europe**, where shortages of healthcare professionals threaten the resilience and sustainability of healthcare systems. **WHO/Europe has warned that failure to retain young doctors will compound the projected European shortfall of 600.000 physicians by 2030**[27]. Against this backdrop, improving junior doctors' working conditions is not merely a labour rights issue, it is a cornerstone of sustainable healthcare systems, attaining universal health coverage, quality of care and patient safety.

The working time of junior doctors is thus a critical determinant of professional experience. Excessive workloads correlate with dissatisfaction, a decline in training quality, and difficulties in work-life balance, leading to attrition and reduced retention capacity[Figure 1]. In light of the workforce crisis and the pressing need to retain young doctors, it is essential to identify and implement targeted policy interventions to reduce job abandonment. Therefore, understanding current trends in junior doctors' working hours is decisive to inform effective health policies in Europe.

3. How are working hours regulated in the European Union?

The **European Working Time Directive (EWTD, Directive 2003/88/EC)**[28] was adopted by the European Parliament and Council in 2003 with the objective of safeguarding the health, safety, and well-being of all workers across the EU. It sets out **minimum standards** for working time and rest periods, thereby ensuring fair and safe working conditions as a cornerstone of the **European Pillar of Social Rights**[29].

Since 2009, the Directive has also applied fully to **junior doctors**, requiring Member States to incorporate its provisions into national legislation. The EWTD grants every worker in Europe the following rights:

- Limited **weekly working hours**, with an average working time for each 7-day period **not exceeding 48 hours**, including overtime;
- Minimum **daily rest period of 11 consecutive hours** in every 24 hour-cycle;
- Minimum **weekly rest period of 24 uninterrupted hours** for each 7-day period, in addition to the minimum daily rest period;
- A **right to breaks** during working hours exceeding six hours;
- **Paid annual leave** of at least 4 weeks per year.

Guaranteeing these rights is central to the creation of a **healthy and safe working environment** in healthcare and beyond.

CURRENT CHALLENGES AND COMPLIANCE

Despite being in force for two decades, compliance with the EWTD remains a persistent challenge, particularly in the health sector. Reports across Europe reveal that **junior doctors frequently work hours far beyond the EWTD limits**, with regular weekly workloads of 60-70 hours still reported in some countries and/or specialities[30-32]. These excessive schedules are closely correlated with exhaustion, burnout, and reduced quality of care.

A survey conducted by the EJD in 2022 found that although most of the member countries had transposed the EWTD into national legislation for junior doctors, **the majority (77%) did not enforce it in practice**[33]. Structural and operational barriers persist at multiple levels, from PGT programmes to hospitals and national oversight systems, resulting in continued breaches of the Directive and national legislation.

These findings underscore the urgent need for **enhanced enforcement and monitoring mechanisms** across Member States. Without effective implementation, the EWTD's protective framework risks remaining largely aspirational, failing to shield junior doctors from unsafe working patterns and undermining both their well-being and patient safety.

4. Why is a unified study of junior doctors' working hours across Europe important?

The working hours of junior doctors have been investigated in multiple studies across Europe, though most have been **focal in nature**, limited to specific specialities, institutions, or national contexts. For example, several surveys in surgical disciplines, including obstetrics and gynaecology, neurosurgery, and cardiothoracic surgery, have documented extended working hours and their perceived impact on training and well-being[31,32,34]. Other studies, such as those conducted in Ireland and the United Kingdom, have explored the implications of long shifts, including associations with burnout, stress, and dissatisfaction, sometimes in connection with compliance with the EWTD[23,35,36].

Importantly, while **compliance with the EWTD** has been assessed in a number of these studies, this has often been only one component of broader analyses focused on training or well-being. Research consistently indicates that junior doctors frequently exceed the EWTD thresholds, but the available evidence remains fragmented and varies by speciality and national context[30–37].

To the best of our knowledge, a single **comprehensive study conducted in Spain across all residency specialities** has been conducted. This study **confirmed a systemic non-compliance with EWTD provisions** and revealed that 80% of junior doctors regularly exceeded the 48-hour weekly threshold and that there were frequent failures to guarantee adequate rest and recovery times[30]. These results point to **structural issues that undermine both the quality of training and the sustainability of the workforce**.

Despite these contributions, **no Europe-wide study using a unified methodology** has yet been carried out. Such a study would allow for systematic cross-national comparisons, identify common patterns and divergences, and provide a robust evidence base to inform policy. Given the ongoing health workforce crisis, a coordinated European approach is essential to generate actionable evidence on working hours, junior doctors' well-being, and the sustainability of medical training systems.

Methodology

Methodology

This study adopts an observational cross-sectional design, based on a structured, self-administered online questionnaire. The target population comprises junior doctors currently undergoing postgraduate training (PGT) in any of the member countries of the European Junior Doctors Association (EJD).

DATA COLLECTION

The questionnaire[Annex 1] was adapted from validated instruments in the existing literature, including a prior study on junior doctors working hours and European Working Time Directive (EWTD) compliance[30]. It was reviewed by a panel of experts from the EJD and piloted among 30 junior doctors from diverse member states to ensure relevance and clarity.

Following formal approval of the study protocol at the EJD General Assembly, during the Spring Meeting of 2024 in Montpellier, and ethical clearance by the Research Ethics Committee of the Lisbon School of Medicine (Faculdade de Medicina da Universidade de Lisboa; reference 166/24), the survey was disseminated via a secure online platform (EUSurvey). National representatives coordinated the distribution in each country, in accordance with a predefined dissemination strategy and a research agreement between country delegates and the study authors.

A non-probabilistic quota sampling approach was employed per country, with a minimum of 1% of respondents expected in each of the quotas (n = 1993). We aimed for a sample size with a 95% confidence level and ±3% precision relative to the total population of junior doctors in each participating country.

OBJECTIVES

- To describe the working hours of doctors undergoing PGT across Europe, including average hours reported by speciality and country.
- To examine daily and weekly rest periods, providing a comparative overview across European countries
- To determine the satisfaction of junior doctors and its association with working hours across Europe and their uptake, providing a comparative overview across European countries.
- To assess the level of compliance with the provisions of the EWTD.

STATISTICAL ANALYSIS

Variables were described using mean and standard deviation or median and interquartile range (IQR), according to their distribution. Data were analysed using chi-square tests and t-tests for group comparisons. We performed a logistic regression model assessing the impact of working hours on satisfaction outcomes. Analysis was conducted across country and speciality groups, which were grouped in four categories (surgical specialities, clinical specialities, community care and central services/clinical support). The detailed stratification of each speciality into these groups is described in Annex 2. Statistical significance was set at $p < 0.05$. All analysis were performed using Stata version 16.1 (StataCorp. 2019. Stata Statistical Software: Release 16. College Station, TX: StataCorp LLC).

Survey Findings

Survey Findings

1. Who participated in the study?

A total of **6,165 junior doctors** from 26 European countries took part in the survey, offering the largest snapshots to date of residents' working conditions across the continent. The predetermined quota was achieved for **19 countries** and data from their respondents was analysed (n = 5831, 95%). The average respondent was **29 years old**, placing them in the early years of their medical career. In terms of gender, the cohort was predominantly **female (61%)**, while 38% identified as male and 1% as non-binary or other. This distribution is congruent with the overall composition of the medical workforce in Europe, where women now represent the majority among younger generations of doctors.

The survey captured participants across different stages of postgraduate training (PGT). While some respondents were in their later years of residency, the majority were in the **first four years of PGT (80%)**, underscoring that the findings largely represent the perspectives of doctors in the early, most intensive phase of training. These are precisely the years in which junior doctors are most exposed to long and irregular working hours, and where working conditions play a critical role in shaping career trajectories, retention, and professional well-being.

Demographic Characteristics			N = 5831
Age (years)	29 (4)		
GENDER		**SPECIALITIES**	
Female	3538 (61%)	Clinical specialities	2763 (49%)
Male	2244 (38%)	Surgical specialities	1680 (29%)
Non-binary / Other	38 (1%)	Community care	727 (13%)
		Central services / clinical support	525 (9%)
WORK-LIFE SATISFACTION		**WORK SATISFACTION**	
Very dissatisfied	741 (13%)	Very dissatisfied	437 (8%)
Dissatisfied	2237 (39%)	Dissatisfied	1389 (24%)
Neither satisfied or dissatisfied	1344 (23%)	Neither satisfied or dissatisfied	1360 (23%)
Satisfied	1245 (21%)	Satisfied	2242 (39%)
Very satisfied	255 (4%)	Very satisfied	366 (6%)

Data are presented as mean (SD), median (IQR) or n (%).

TABLE 1. **Characteristics of the cohort**

With regard to specialities, almost half of the respondents were training in **clinical disciplines (49%)**, while nearly one in three were in **surgical specialities (29%)**. Smaller but still significant proportions came from **community care (13%)** and **central services or clinical support (9%)**. This distribution ensures that the results reflect not only the experience of hospital-based residents but also those working in community (general practice/family medicine & public health) and support settings, providing a broad overview of the realities facing junior doctors across Europe. The detailed classification of the specialities in each group is described in Annex 2.

As the demographic and speciality profile of respondents mirrors the current composition of Europe's medical workforce, the study findings provide a more representative and reliable evidence base to inform European-level policy.

2. How many hours do junior doctors work in Europe?

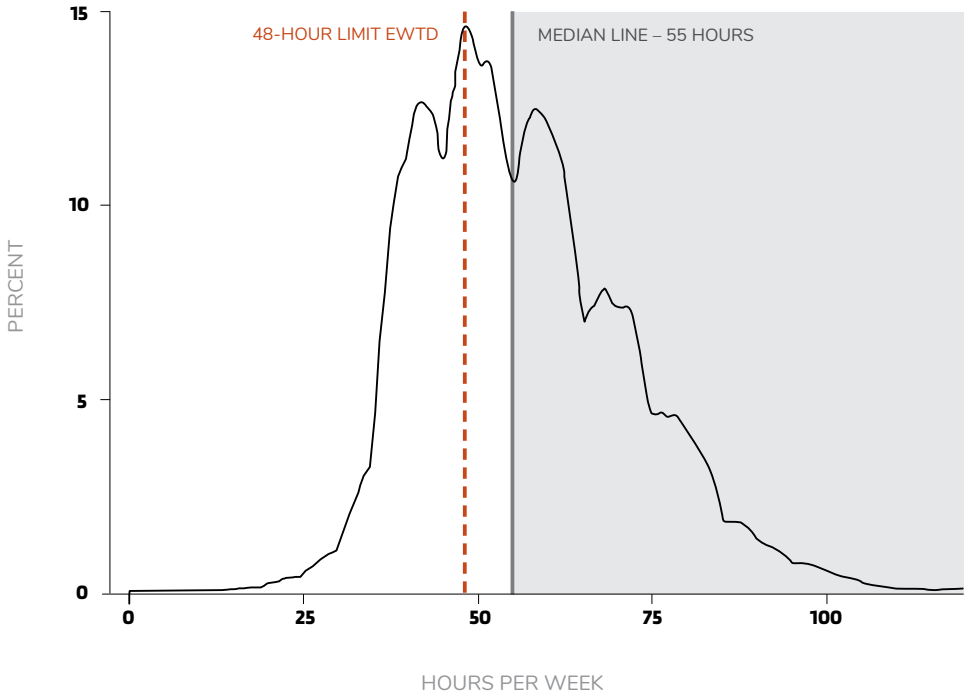
HOURS PER WEEK

Junior doctors across Europe reported working an **average of 57 ± 17 hours per week** (216 ± 61 hours per month) – that is **17 hours above the contractual average of 40 hours** and almost **9 hours beyond the maximum legal limit of 48 hours set by the European Working Time Directive (EWTD)**.

Overall, **more than two-thirds of respondents (71%) exceeded the 48-hour threshold**, demonstrating a structural and widespread breach of the Directive. The distribution is heavily skewed towards overwork: **one in five residents (20%) reported working more than 70 hours per week**, and **one in ten (10%) exceeded 80 hours**. The **longest single shift** in the survey month had a median duration of **24 hours** (IQR 13-30), directly conflicting with established occupational health standards.

Overtime was almost universal: **88% of respondents reported working beyond their contractual hours**. Among them, **two-thirds (69%) received no compensation**, either in pay or in time off. This represents not only a violation of labour standards but also a form of systemic exploitation, with possible detrimental consequences for doctor well-being, retention, quality of care and patient safety.

FIGURE 2. **Distribution of working hours per week**



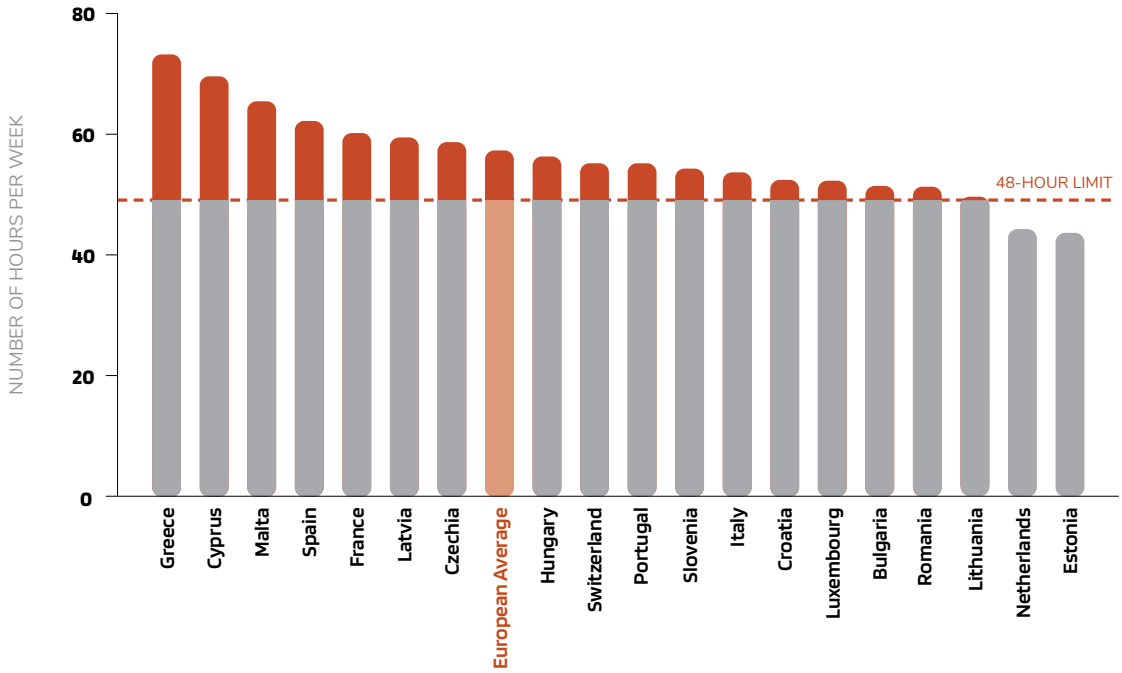
SHIFT DURATION AND NIGHT WORK

Despite well-documented evidence that long and irregular shifts increase fatigue, burnout, and medical errors, these practices remain widespread. **Nearly three out of four residents (73%)** reported working **night shifts**, with half completing **five or more in a single month**. Alarmingly, almost **one in five (18%)** reported working **more than seven night shifts per month** – equivalent to nearly two per week. Similarly, **62% of residents** reported working **24-hour shifts**, and **70%** stated they worked **shifts longer than 13 hours,** averaging **2.4 such shifts per week.**

COUNTRY AND SPECIALITY COMPARISONS

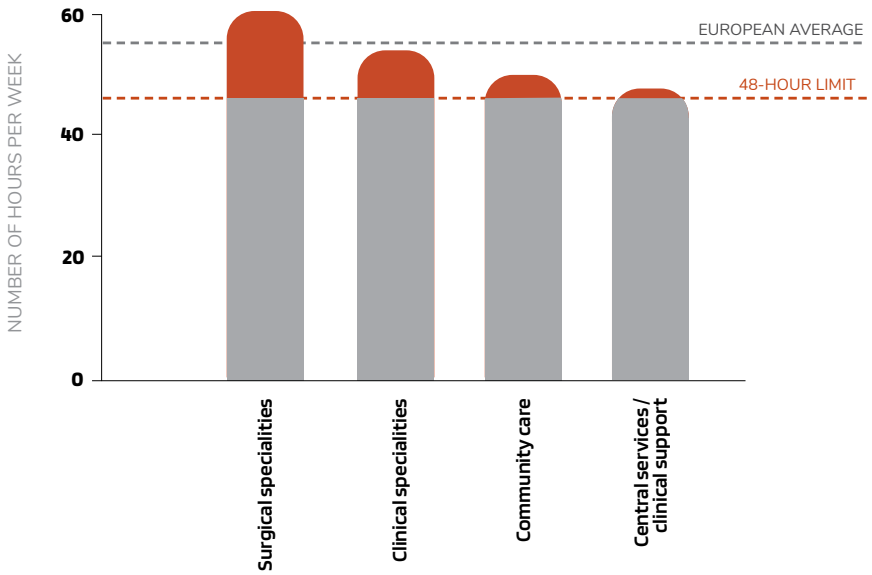
Working time varied significantly across Europe ($p < 0.001$). Reported averages ranged from **43 ± 13 hours per week in Estonia to 72 ± 20 hours in Greece.** Notably, **17 of the 19 participating countries exceeded the 48-hour weekly limit set by the EWTD**, underscoring a systemic pattern of non-compliance[Figure 3].

FIGURE 3. **Working hours per week in European countries**



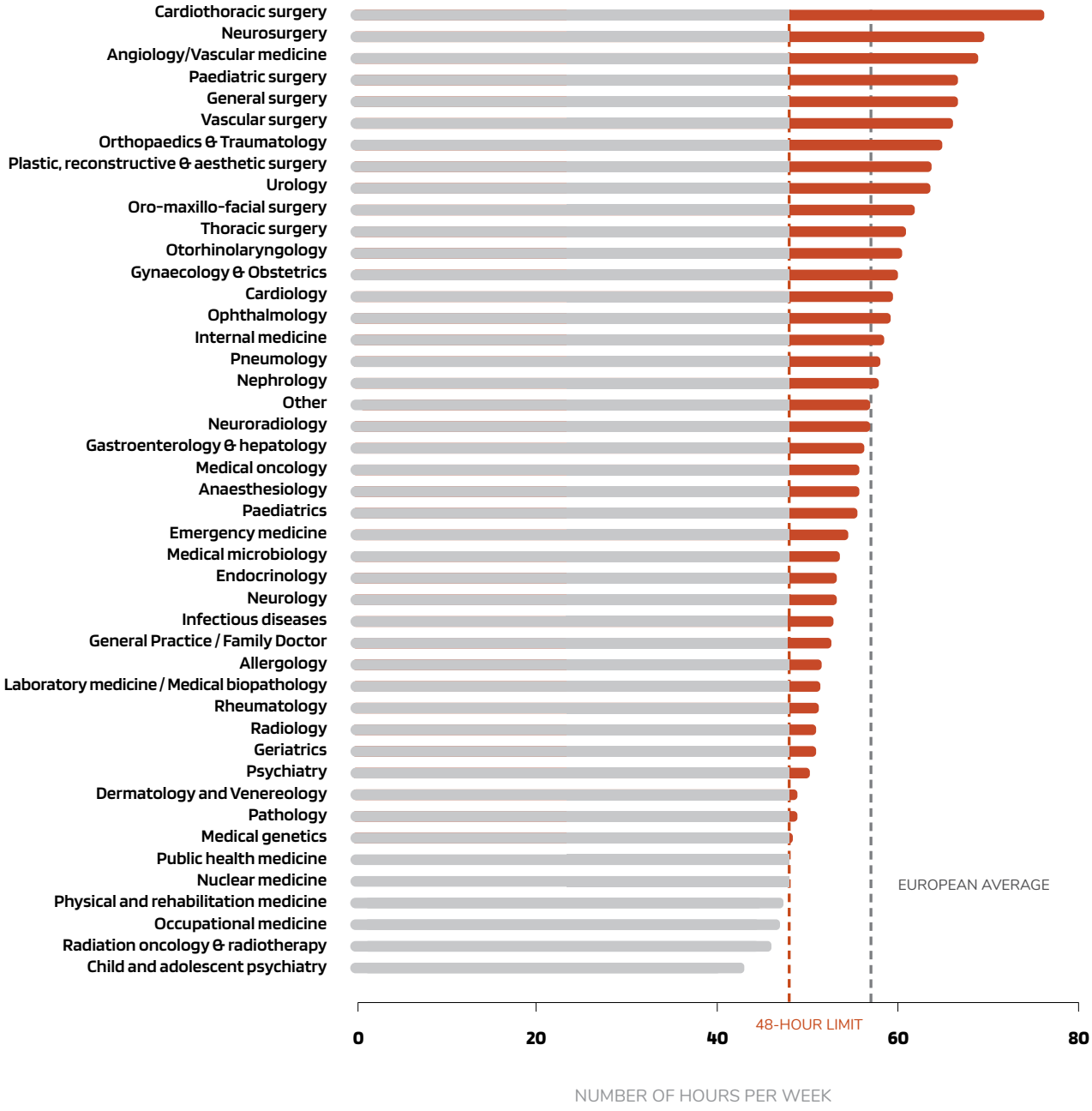
Differences were also evident between specialities ($p < 0.001$). **Surgical residents** worked the most, averaging **62 ± 17 hours per week**, followed by those in **clinical specialities (56 ± 16 hours)**. Junior doctors in **community care (52 ± 15 hours)** and **central services/clinical support (50 ± 14 hours)** reported fewer hours, though **all speciality groups still exceeded the EWTD threshold**[Figure 4].

FIGURE 4. **Working hours per speciality group**



A detailed comparison of working hours per each speciality highlights the higher workload of surgical specialities and hospital-based specialities[Figure 5].

FIGURE 5. **Working hours per speciality**



Specialities with under 10 replies or not listed in UEMS directory were classified under other

In summary, the data reveal a consistent pattern across Europe: junior doctors routinely work well beyond safe and legal limits, with night shifts and extended shifts representing a critical driver of fatigue, dissatisfaction, and potential risk to quality of care and patient safety.

3. Do junior doctors in Europe get enough rest?

RESTING TIMES AND ANNUAL LEAVE

Rest and recovery are critical components of safe medical practice, yet the survey shows that junior doctors across Europe often lack adequate opportunities for recuperation. On average, residents reported working **five shifts per week longer than six hours**, but taking **short breaks during their regular working hours only twice a week**. This indicates that long shifts are not consistently accompanied by sufficient intra-shift recovery, with implications for fatigue, concentration, and quality of care and patient safety.

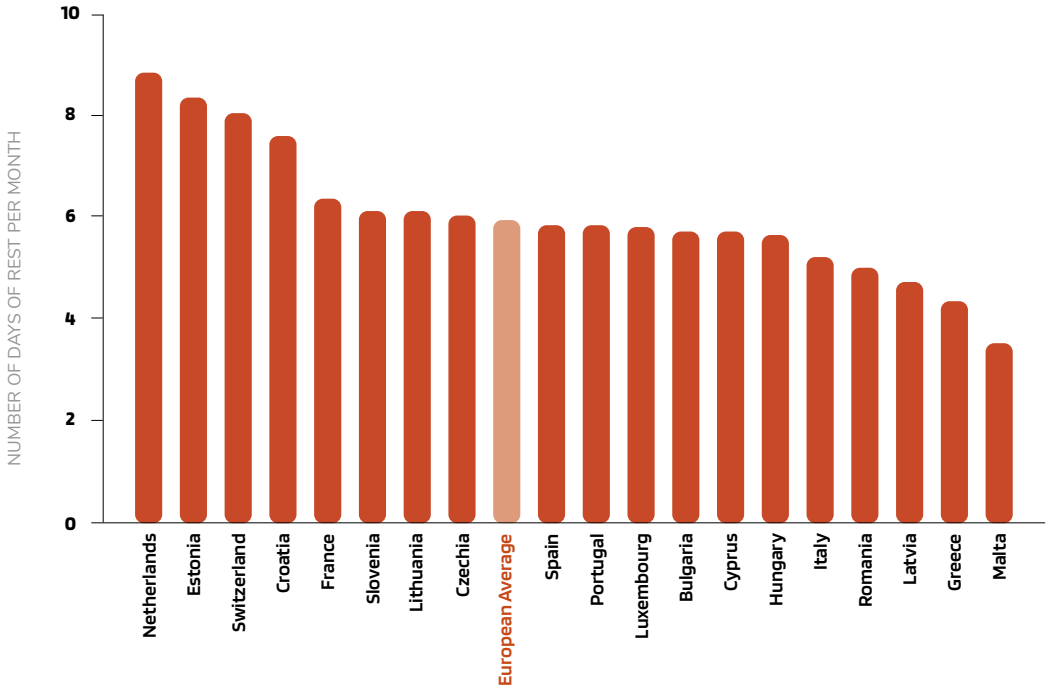
When asked about weekly rest, the majority of junior doctors (**85%**) reported having at least one day off in the month assessed. However, this still left a significant minority without guaranteed weekly rest, and overall, respondents averaged only **six rest days per month** – far below what would be expected for a balanced work–life rhythm.

The situation is equally concerning with regard to annual leave. **More than one in three junior doctors (35%)** reported not having taken the legally mandated minimum of **four weeks of annual leave** in the previous year, a finding that highlights systemic barriers to rest and recovery.

COUNTRY AND SPECIALITY COMPARISONS

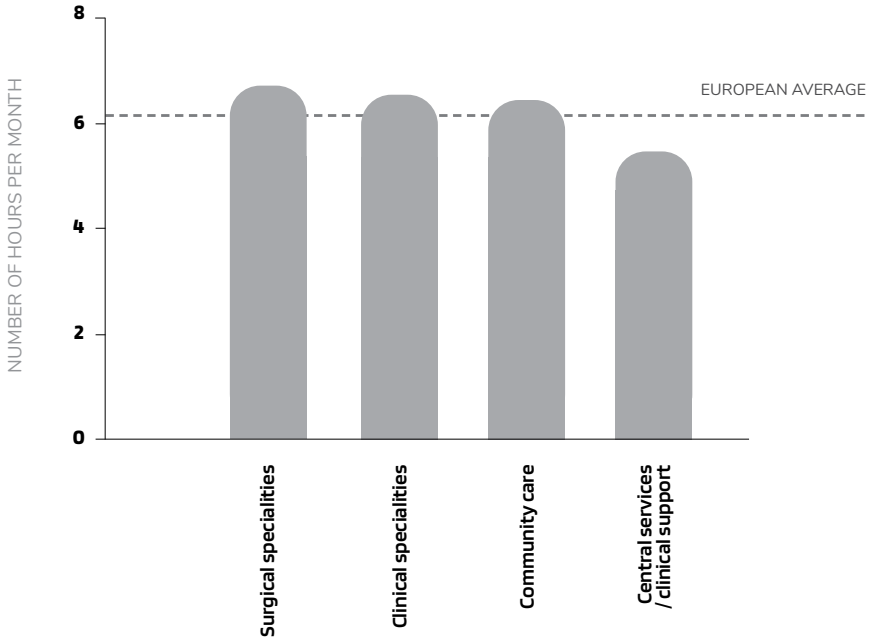
Important cross-country differences emerged ($p < 0.001$). Junior doctors in **the Netherlands, Estonia, and Switzerland** reported the highest number of rest days (8-9 per month), while those in **Latvia, Greece, and Malta** reported the lowest (4-5 per month)[Figure 6].

FIGURE 6. **Resting days per month in European countries**



Differences were also observed across specialities ($p < 0.001$). **Community care (6.5 days per month)** and **central services (6.4 days)** reported the highest levels of rest, followed by **clinical specialities (5.9 days). Surgical residents had the fewest rest days, averaging just 5.4 per month**[Figure 7].

FIGURE 7. **Resting days per month in different speciality groups**



In summary, junior doctors in Europe frequently work long shifts with insufficient breaks, limited weekly rest, and in many cases inadequate annual leave. These deficits in recovery time compound the risks associated with long working hours, increasing the likelihood of burnout, attrition, and compromised quality of care and patient safety.

4. Are junior doctors satisfied with their work and work-life balance?

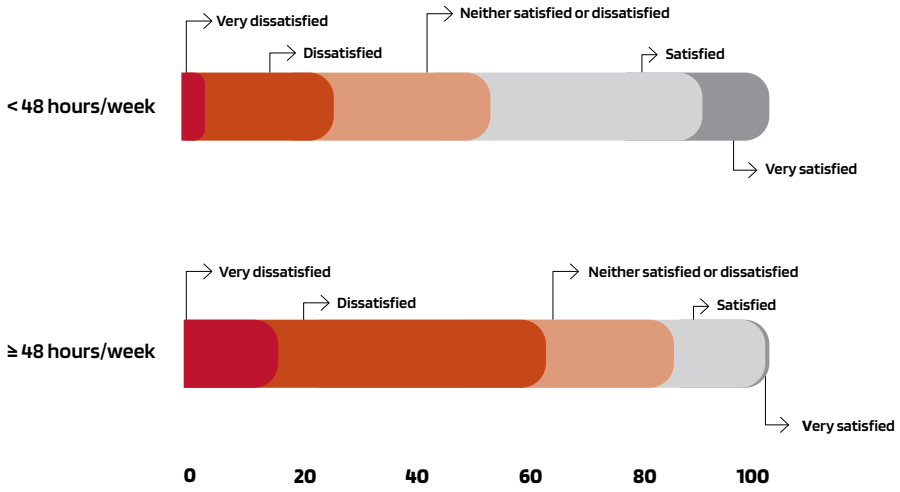
SATISFACTION AND WORKING TIME

The survey highlights a **worrying degree of dissatisfaction among junior doctors in Europe**, with direct implications for workforce retention and the sustainability of health systems. Almost **one in three residents (32%, n = 1826)** expressed being dissatisfied or very dissatisfied with their work and PGT, while another **23% reported ambivalence**. In total, this means that **more than half of junior doctors are not positively engaged with their work**, a red flag for long-term motivation and career stability.

When it comes to **work-life balance**, the picture is even more concerning. **Only one in four junior doctors (25%)** felt satisfied or very satisfied, whereas **the majority (52%, n = 2978)** reported dissatisfaction. This represents the single most critical vulnerability identified in the survey: the inability of junior doctors to reconcile professional demands with personal life. Evidence consistently shows that **poor work-life balance is a major driver of burnout, attrition, and early exit from the profession**, with knock-on effects for health system resilience and patient care.

The association between **long working hours and dissatisfaction** is particularly striking. Among junior doctors working more than 48 hours per week, **over 60% reported being dissatisfied with their work-life balance**, compared to only 26% among those working fewer hours[Figure 8]. Statistically, working above this threshold increased the odds of dissatisfaction more than fourfold (OR 4.62, 95% CI 4.08–5.24, p < 0.001).

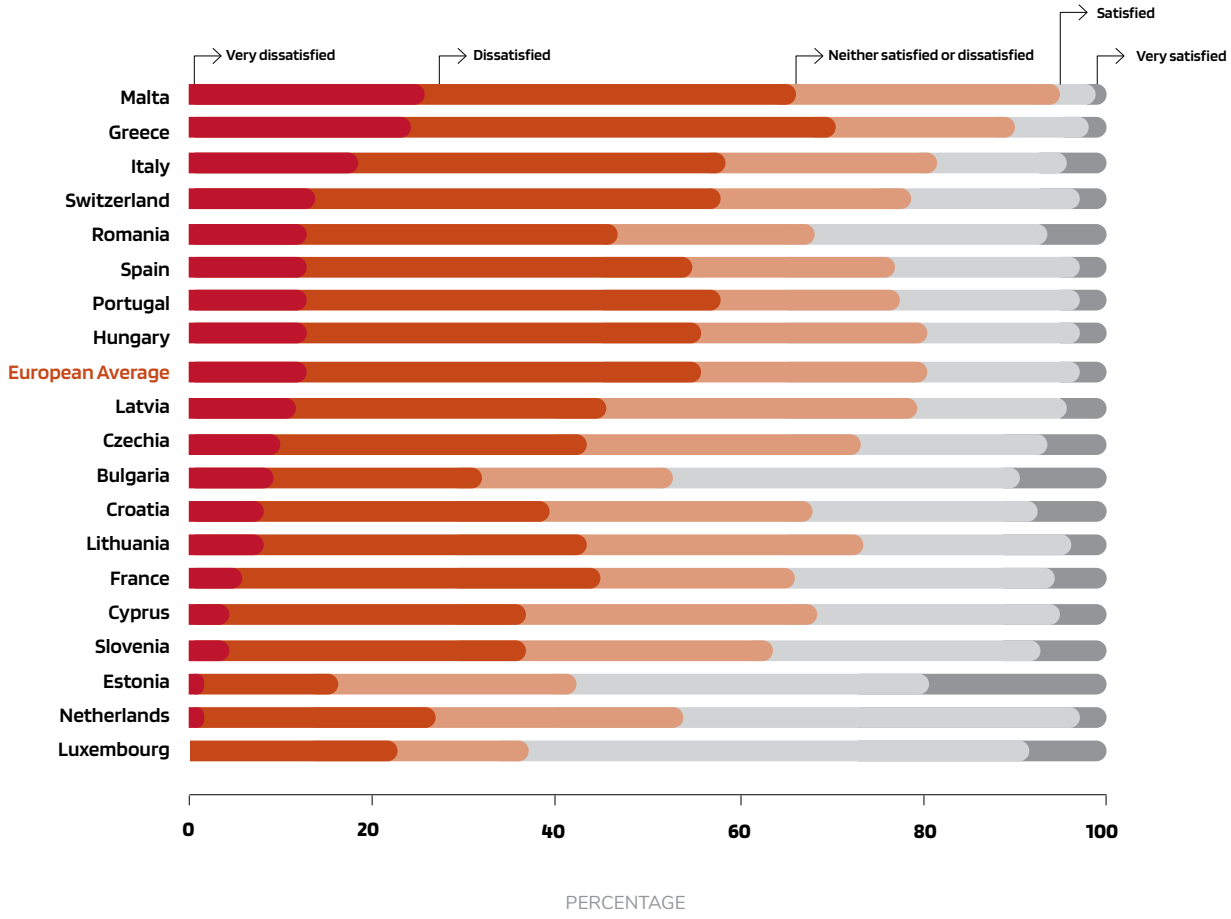
FIGURE 8. **Work-life satisfaction associated with working hours**



COUNTRY AND SPECIALITY COMPARISONS

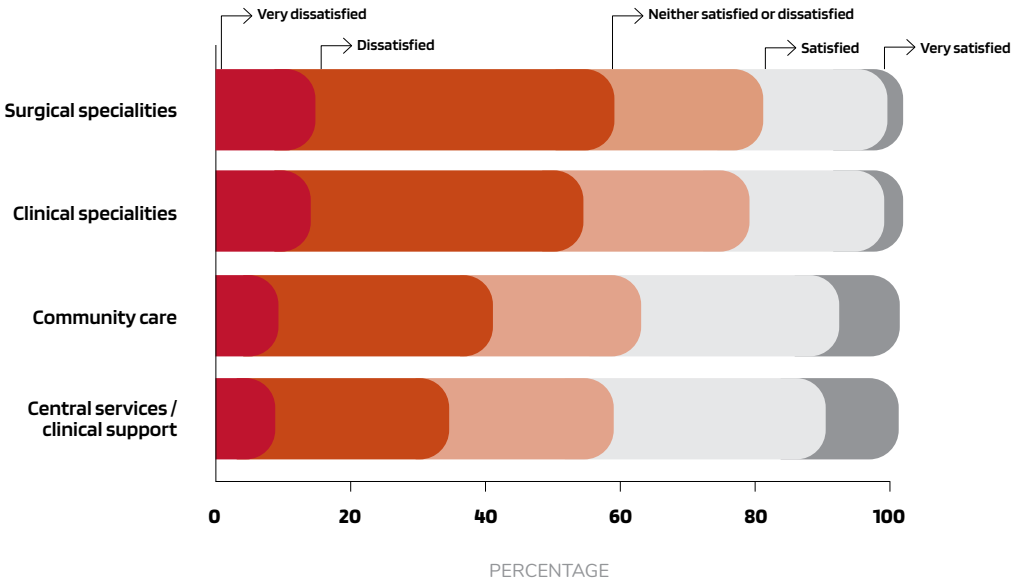
Cross-country differences reinforce this picture: **higher dissatisfaction levels were concentrated in countries with longer working hours**, such as Greece, Malta, Portugal, and Switzerland. By contrast, satisfaction levels were higher in countries with shorter hours, such as Estonia, the Netherlands, and Luxembourg[Figure 9].

FIGURE 9. **Work-life satisfaction per country**



Speciality comparisons revealed the same pattern: **surgical residents reported the lowest satisfaction,** followed by clinical specialities, while **community care and central services** showed comparatively better outcomes[Figure 10].

FIGURE 10. **Work-life satisfaction associated with specialities**



In summary, dissatisfaction – rather than satisfaction – emerges as the defining feature of junior doctors' working lives in Europe. The prevalence of dissatisfaction with both work and work-life balance, and its strong association with long working hours, signals an urgent risk of burnout and workforce attrition. Without structural reforms to address these issues, health systems face escalating challenges in retaining doctors and maintaining the quality of patient care.

Policy Implications and Recommendations

Policy Implications and Recommendations

1. What are the implications of our study?

The findings of this study clearly demonstrate that junior doctors in Europe are working longer hours than what is healthy and safe, and far beyond the limits established by the European Working Time Directive (EWTD), with systemic deficits in rest, breaks, and annual leave. **The majority of respondents routinely exceeded their contractually defined working hours, with widespread exposure to 24-hour or longer shifts, inadequate breaks, and unpaid overtime.** These patterns have direct and profound implications for workforce sustainability, recruitment, and retention across Europe.

Across Europe, healthcare systems are grappling with workforce shortages and heightened demands from an aging population with extended lifespans[26, 38, 39] . The European region is already facing a projected shortfall of 4.1 million health workers by 2030[27]. **Junior doctors represent the pipeline for the future workforce, yet the current conditions – marked by overwork, dissatisfaction, and poor work-life balance – are accelerating attrition rates.** Nearly half of respondents reported dissatisfaction with their work, and three-quarters expressed poor work-life balance. These indicators predict higher intentions to leave training programmes, speciality fields, or even the profession altogether[26].

The attractiveness of medicine as a career is jeopardized when training conditions are perceived as unsafe, unsustainable, and incompatible with personal well-being[40–42]. Excessive workloads and limited rest contribute to damage for healthcare professions, discourage prospective postgraduate applicants and undermining recruitment efforts at a time when Europe needs to expand its workforce.

For those already in training, dissatisfaction and burnout substantially increase the risk of attrition[23,35]. The survey revealed a **strong correlation between working more than 48 hours per week and dissatisfaction with work-life balance** (over 60% dissatisfied at >48 hours vs. 26% below this threshold). **Without interventions, this cycle of poor working conditions feeding dissatisfactions, and dissatisfaction driving attrition, will continue to erode the stability of healthcare systems.**

Ultimately, these findings highlight that **current failures in enforcing EWTD provisions** are not only a matter of occupational health and labour law, but also a **central determinant of the health systems challenges. Junior doctors' excessive working hours compromise patient safety, undermine training quality, and exacerbate existing workforce shortages.**

2. Proposals for action

To safeguard the future of Europe's health workforce, urgent and coordinated policy action is required. Stakeholders at european, national, and institutional levels must enforce existing protections, strengthen oversight, and design supportive environments for junior doctors' well-being.

1. AT THE EUROPEAN UNION (EU) LEVEL

- **Develop a comprehensive, multi-sectoral EU health workforce strategy:** Workforce challenges must be treated as a European priority. Addressing shortages and retention cannot be the sole responsibility of health ministries; it requires **coordinated action across labour, education, finance, and cross-border mobility policies,** embedded in a coherent EU-wide strategy for the health workforce.
- **Reaffirm EWTD enforcement as a quality of care and patient safety priority:** The **European Commission and Parliament** should frame compliance with Directive 2003/88/EC not only as a labour rights issue but as a **core pillar of healthcare quality, patient safety, and system sustainability.**
- **Make working hours a core health workforce indicator:** Use **working hours as a measurable indicator** directly linked to mental health, quality of care, and patient safety. This data should be **collected systematically at local, national and European levels**, ideally integrated into existing joint questionnaires (Eurostat/OECD/WHO-Europe).
- **Strengthen monitoring and comparability across Member States:** Support initiatives that **regularly track the health workforce situation**, such as the ongoing EU–WHO/Europe collaboration on mental health of doctors and nurses. Publish **periodic, comparable datasets** on working hours, rest, and compliance, enabling transparency and accountability across Member States.

2. AT THE NATIONAL LEVEL

- **Enforce the law with effective oversight**: Treat EWTD breaches as patient safety violations. Expand labour inspectorates with health-sector units empowered to audit rosters, interview staff confidentially, and impose sanctions.

- **Link funding and accreditation to compliance:** Make PGT programme approval and hospital financing contingent on verified compliance with working-time and rest standards.
- **Integrate workforce planning and funding**: Increase staffing levels, rebalance service/education duties, and provide resources to end structural dependence on junior doctors' overwork.
- **Protect whistle-blowers**: Ensure residents can report excessive hours safely, with legal protection from retaliation.

3. AT THE INSTITUTIONAL AND TRAINING LEVEL

- **Design safe rotas:** transition to the elimination of 24-hour shifts for residents, set a maximum shift of 13 hours, and require rosters to be published at least six weeks in advance.
- **Guarantee protected rest:** Enforce daily (11h), weekly (36h), and annual rest entitlements. Provide proper rest facilities in hospitals, and respect digital disconnection during off-duty periods.
- **Implement digital time-tracking:** Automated systems should log actual hours worked and rest taken, feed into payroll, and flag breaches to training committees and hospital boards.
- **Prioritise training and well-being:** Safeguard protected teaching time, reduce non-educational service overload, and establish occupational health services offering fatigue risk management and mental health support.

4. AT THE PATIENT AND CIVIL SOCIETY LEVEL

- **Advocate for stricter EWTD enforcement:** Non-governmental organisations should be recruited to collaborate in campaigning for the enforcement of the EWTD.
- **Develop guidelines for safe working conditions:** Create best practice recommendations and disseminate these models to hospitals/governments to support their implementation.
- **Campaign for safe staffing and rest for doctors:** Patient organisations should advocate for the **well-being of professionals as an issue of quality of care and patient safety** and gather public support for reforms.

Stakeholder	Policy Action	Expected Impact
European Institutions	Promote working hours and resting times as a core health workforce indicator and its integration into existing European level monitoring tools (e.g., Eurostat, OECD, WHO-Europe)	Ensure measurable and comparable indicators directly linked to mental health and physician well-being, quality of care and patient safety
	Establish Europe-wide monitoring and reporting of EWTD compliance	Transparency, benchmarking, accountability
	Develop comprehensive multisectorial health workforce strategy and enforce directive compliance	Encourage reforms, reduce systemic breaches
National Governments	Mandate independent labour inspections of hospitals and training institutions	Ensure enforcement of working time protections
	Invest in adequate working conditions and stable contracts, fair pay structures, and clear career pathways	Improve retention and motivation, reduce attrition and workforce migration, and strengthen long-term sustainability of the health system
	Financing facilities that support healthy working conditions and Guarantee minimum rest times with protected scheduling	Improve rest, reduce burnout
	Invest in workforce well-being by setting and enforcing laws on safe working hours, staffing, and rest requirements (flexible hours, avoidance of excessive overtime, protected breaks)	Increase retention, expand active workforce
	Promote healthcare workers representation in policymaking decisions and strive for evidence-based action and interventions	Increase relevance and effectiveness of policies, build trust, and ensure timely interventions that strengthen workforce wellbeing and retention
Healthcare Facilities & Training Institutions	Implement safe rota systems eliminating 24h shifts	Enhance quality of care and patient safety and physician well-being
	Track and report overtime systematically, ensuring compensation for all extra hours	Increase fairness and educe exploitation
	Guarantee protected time for breaks during shifts and access to adequate rest facilities	Reduce fatigue and error risk
	Establish comprehensive wellbeing programmes, including mental health services, peer support, mentoring, and fatigue management	Improve morale and retention
Civil Society & Patients	Advocate for stricter EWTD enforcement as a safeguard for both workers and patients	Sustain political pressure
	Develop and promote best practice guidelines for safe working conditions	Provide models for hospitals/governments
	Raise public awareness about the link between doctors' working hours, wellbeing and quality of care	Build public support for reforms
	Campaign for safe staffing levels and protected rest for doctors as a patient-safety issue	Build public support for reforms

TABLE 2. **Actionable policies for stakeholders**

Conclusion

Conclusion

The findings of this study demonstrate that **junior doctors across Europe systematically work more hours than is healthy, safe, and compatible with delivering optimal patient care**. This is not an isolated problem but a structural pattern that exposes junior professionals to harm, undermines quality of care and patient safety, and jeopardises workforce sustainability.

Importantly, the results **reveal a widespread infringement of the European Working Time Directive within this group of workers**, raising serious concerns about the credibility of existing protections. In this context, the issue goes beyond occupational health: it touches upon the very foundations of the rule of law in the European Union. When agreed legislation is systematically ignored, the legitimacy of the regulatory framework is eroded, and workers and patients alike are left unprotected. Ensuring compliance is therefore not only a matter of health policy, but of upholding the rule of law and the social contract at the heart of the European project.

Enforcing working-time law and restoring genuine rest are non-negotiable conditions for quality of care and patient safety and workforce sustainability. Europe must act decisively: with clear limits, protected rest, robust oversight, and coordinated EU–national leadership, we can transform overtime into opportunity: improving junior doctors' well-being, strengthening training quality, and securing the future of healthcare systems. Ensuring compliance with working-time law is not only about protecting doctors – it is about safeguarding quality of care and patient safety and upholding the rule of law in Europe.

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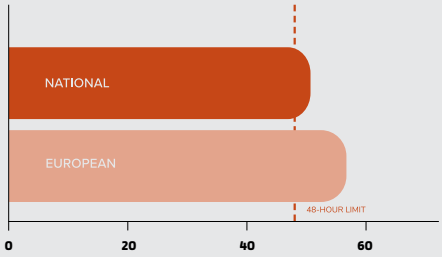
Country Profiles

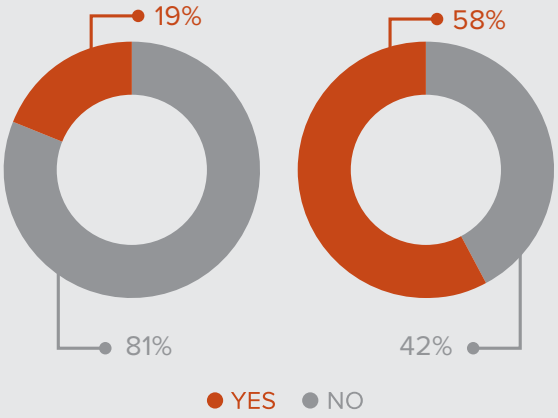
BULGARIA

1. WORKING TIME

51 HOURS PER WEEK

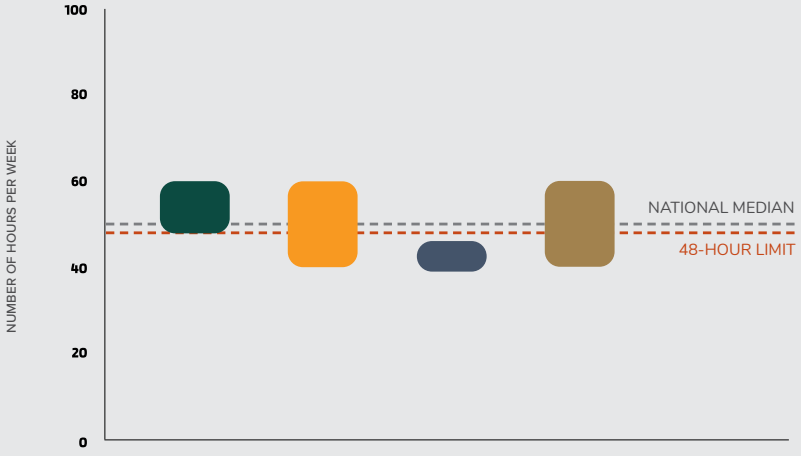


NUMBER OF HOURS PER WEEK



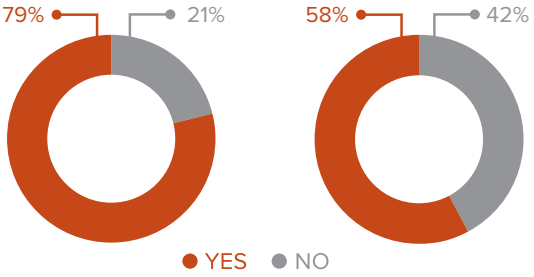
24-HOUR SHIFTS

NIGHT SHIFTS



SURGICAL, CLINICAL, COMMUNITY CARE AND CENTRAL SERVICES & CLINICAL SUPPORT

2. RESTING TIME



DAY OF REST PER WEEK

ANNUAL LEAVE

6

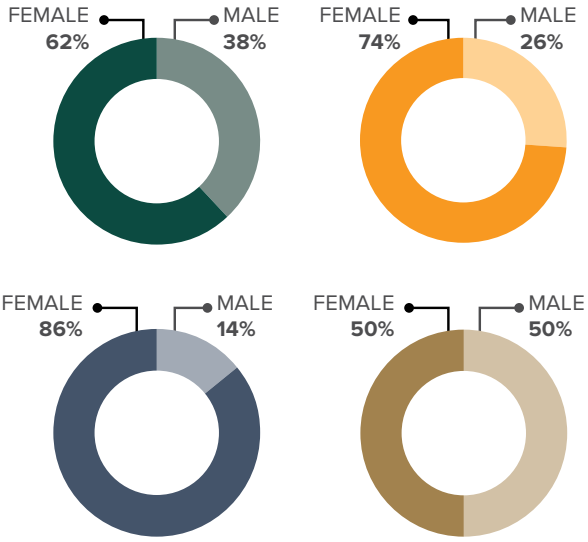
DAYS OF REST PER MONTH

5

NIGHT SHIFTS PER MONTH

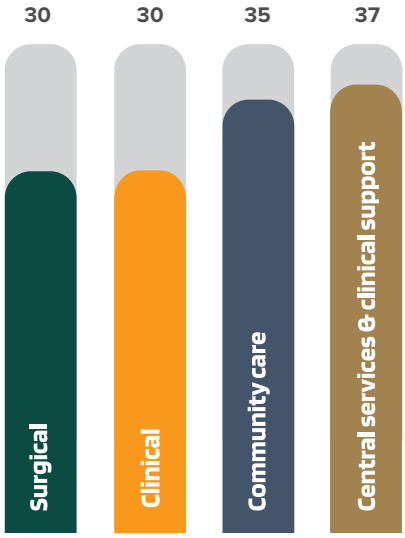
3. DEMOGRAPHICS

GENDER



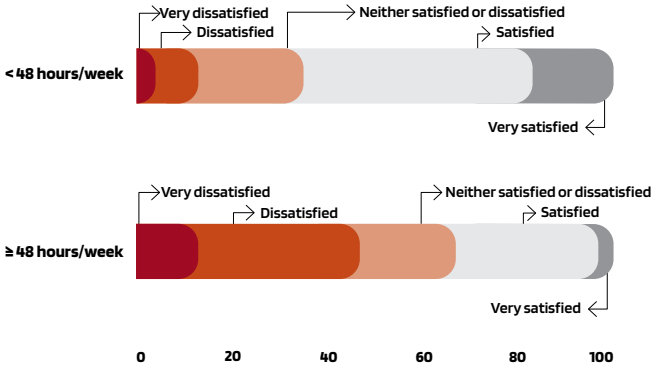
AVG FEMALE • **68%**

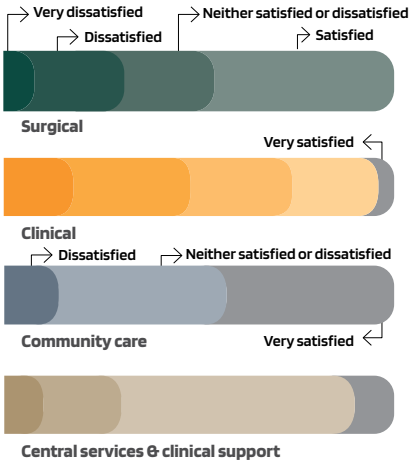
AGE



AVG AGE • **32 YEARS**

4. HOURS & SATISFACTION





- **Junior doctors in Bulgaria worked an average of 51 hours/week, slightly above the EWTD 48-hour limit. One in five (19%) undertook 24-hour shifts and an average of 5 nights/month. Rest was scarce, with only 6 rest days/month and 21% lacked a weekly day off. Almost half (42%) could not take 4 weeks of annual leave. As across Europe, doctors working ≥ 48 hours/week reported worse work-life balance.**

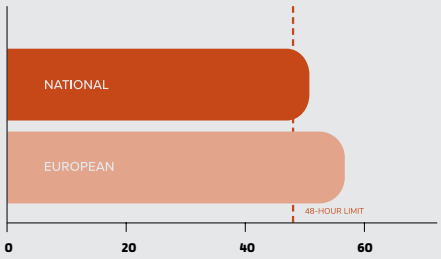
IMMEDIATE PRIORITY

- **Enforcement of the 48-hour cap, reduction of night shifts and enforcement of annual leave uptake.**

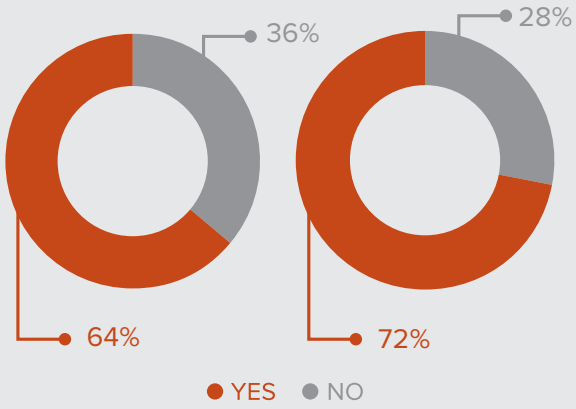
CROATIA

1. WORKING TIME

52 HOURS PER WEEK

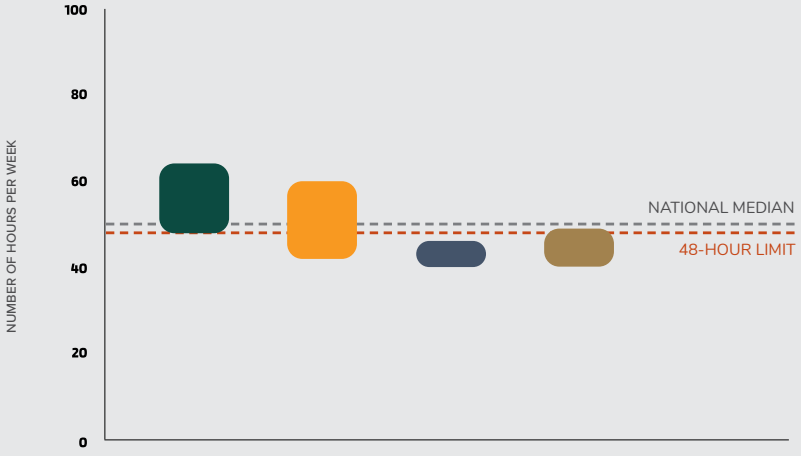


NUMBER OF HOURS PER WEEK



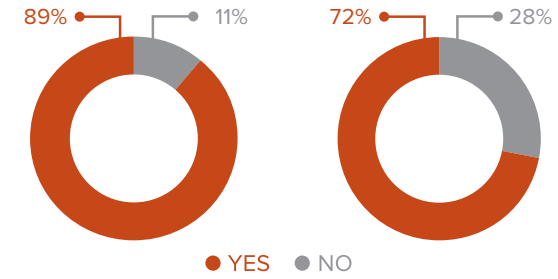
24-HOUR SHIFTS

NIGHT SHIFTS



SURGICAL, CLINICAL, COMMUNITY CARE AND CENTRAL SERVICES & CLINICAL SUPPORT

2. RESTING TIME



DAY OF REST PER WEEK

ANNUAL LEAVE

8

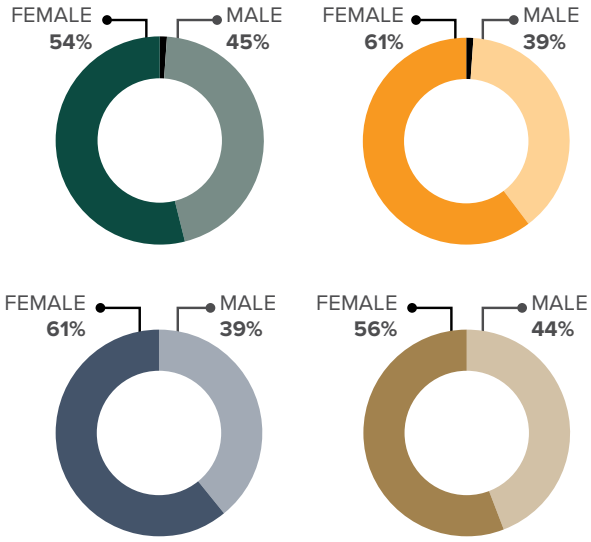
DAYS OF REST PER MONTH

4

NIGHT SHIFTS PER MONTH

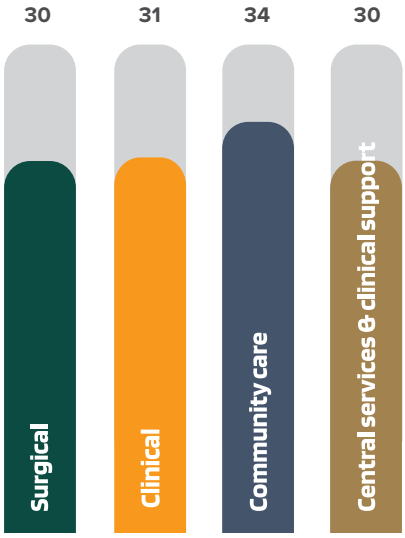
3. DEMOGRAPHICS

GENDER



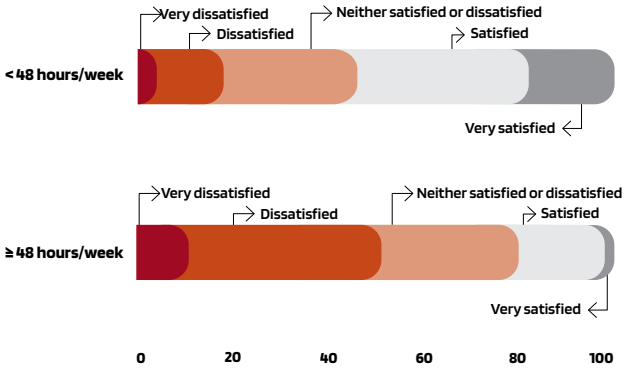
AVG FEMALE • **59%**

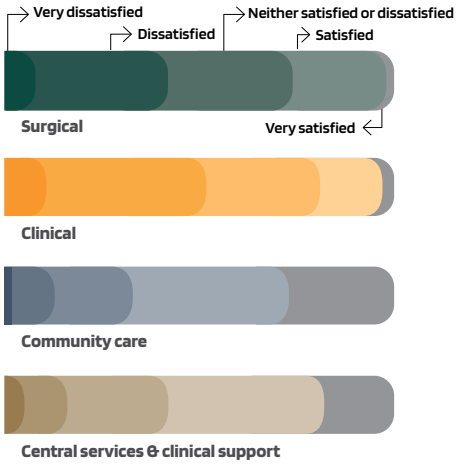
AGE



AVG AGE • **31 YEARS**

4. HOURS & SATISFACTION





- **Mean working hours in Croatia reach 52 hours/week, breaching the EWTD. A total of 64% of residents reported 24-hour shifts and night work averaged 4 nights/month. Most junior doctors had adequate rest with 8 rest days/month but one in ten lacked a weekly day off and 28% of respondents did not take 4 weeks of annual leave. Those working ≥ 48 hours/week clearly showed worse satisfaction.**

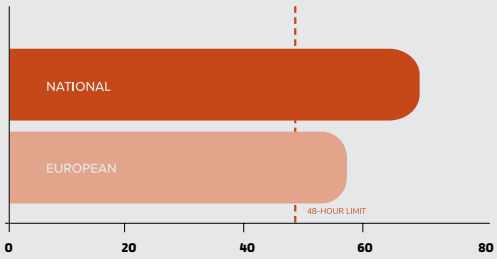
IMMEDIATE PRIORITY

- **Regulate rotas to guarantee EWTD compliance, progressive reduction of 24-hour duties and night shifts.**

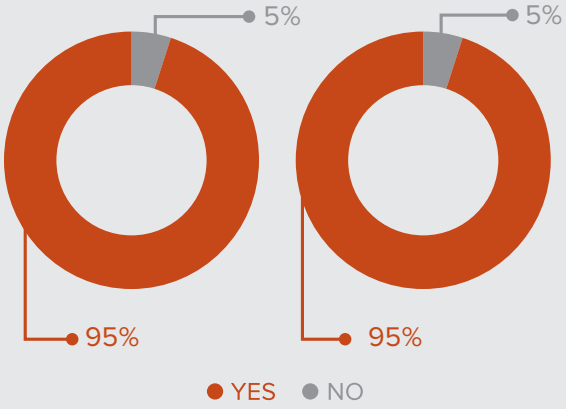
CYPRUS

1. WORKING TIME

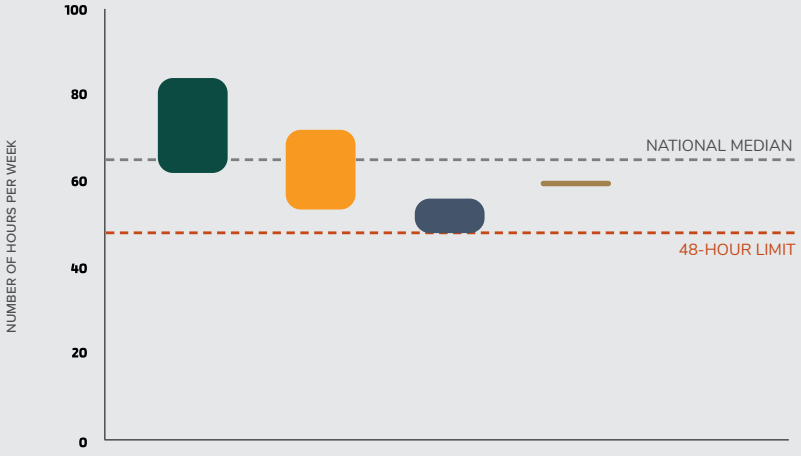
69 HOURS PER WEEK



NUMBER OF HOURS PER WEEK

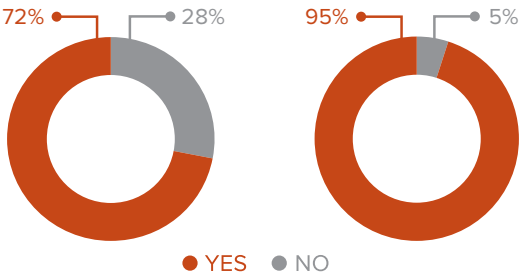


24-HOUR SHIFTS NIGHT SHIFTS



SURGICAL, CLINICAL, COMMUNITY CARE AND CENTRAL SERVICES & CLINICAL SUPPORT

2. RESTING TIME



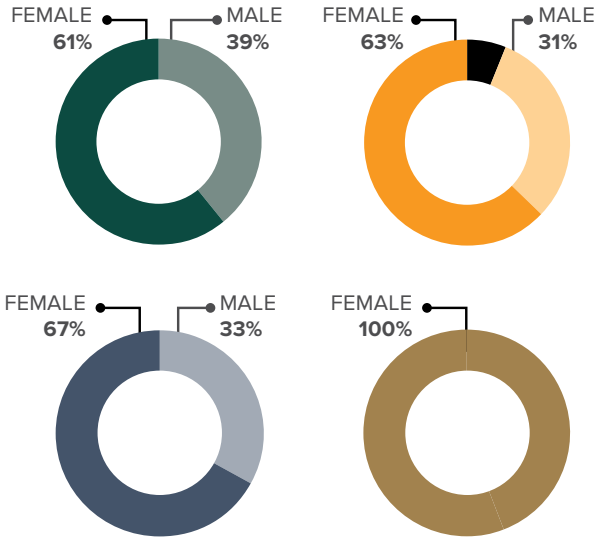
DAY OF REST PER WEEK ANNUAL LEAVE

6 DAYS OF REST PER MONTH

6 NIGHT SHIFTS PER MONTH

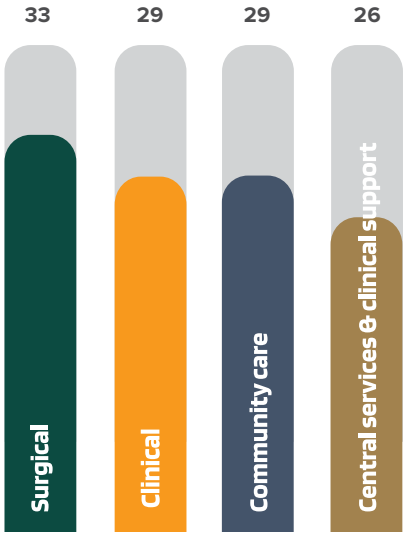
3. DEMOGRAPHICS

GENDER



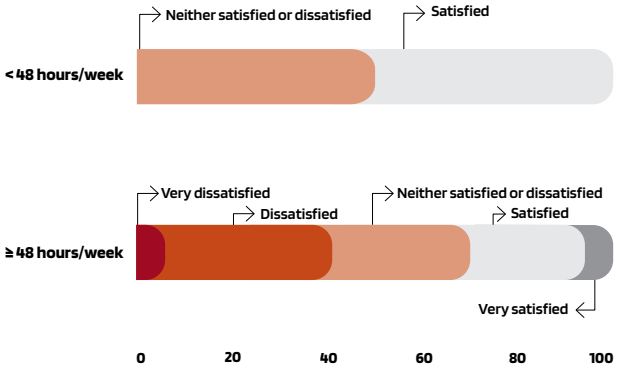
AVG FEMALE • **63%**

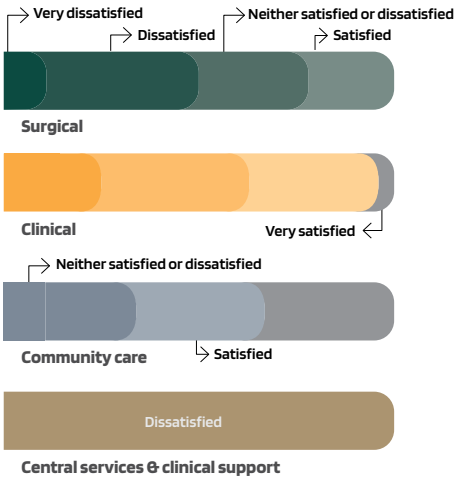
AGE



AVG AGE • **31 YEARS**

4. HOURS & SATISFACTION





- **Junior doctors in Cyprus reported working an average of 69 hours/week, making it the second country in Europe with the longest working hours — far above the EWTD limits. Nearly all (95%) performed 24-hour shifts and night work averaged 6 nights/month. Rest was limited to 6 days/month, and 5% could not take 4 weeks of annual leave. Work-life satisfaction was lowest among those working ≥ 48 hours/week.**

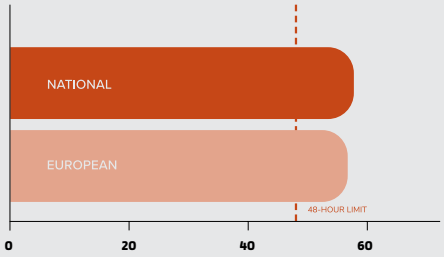
IMMEDIATE PRIORITY

- **Enforce duty-hour limits and introduce effective rota monitoring.**

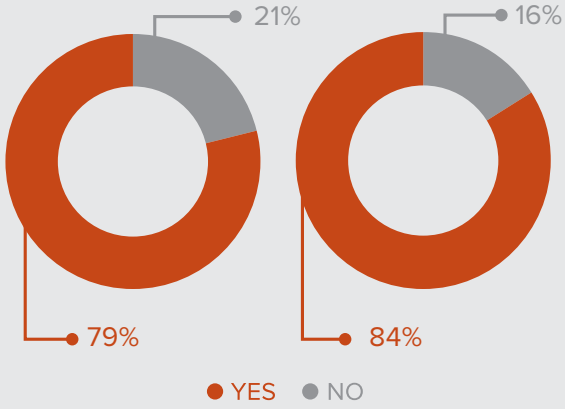
CZECHIA

1. WORKING TIME

58 HOURS PER WEEK

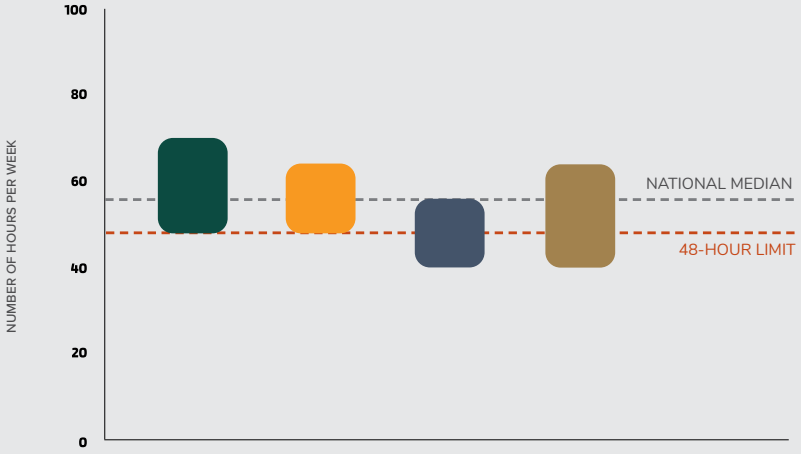


NUMBER OF HOURS PER WEEK



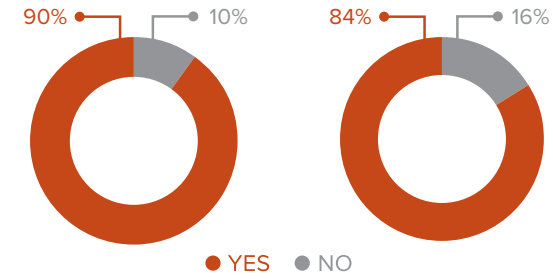
24-HOUR SHIFTS

NIGHT SHIFTS



SURGICAL, CLINICAL, COMMUNITY CARE AND CENTRAL SERVICES & CLINICAL SUPPORT

2. RESTING TIME



DAY OF REST PER WEEK

ANNUAL LEAVE

6

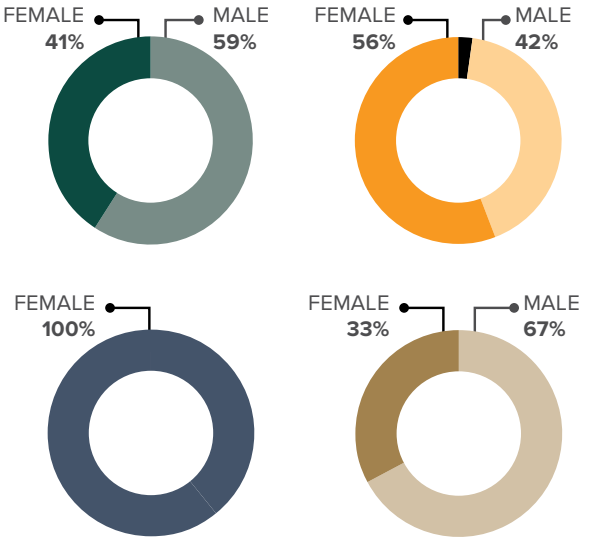
DAYS OF REST PER MONTH

4

NIGHT SHIFTS PER MONTH

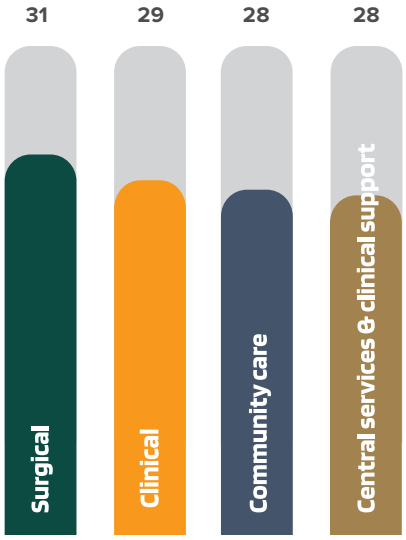
3. DEMOGRAPHICS

GENDER



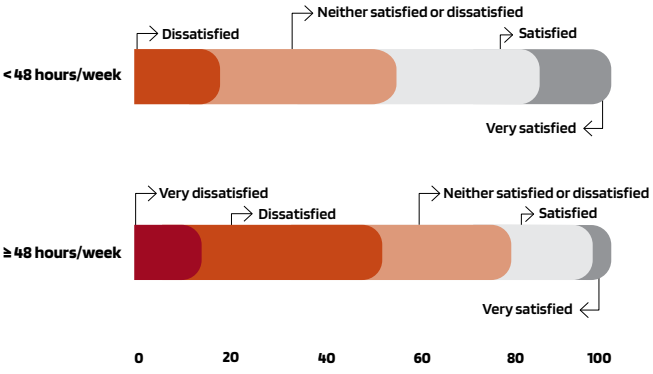
AVG FEMALE • **52%**

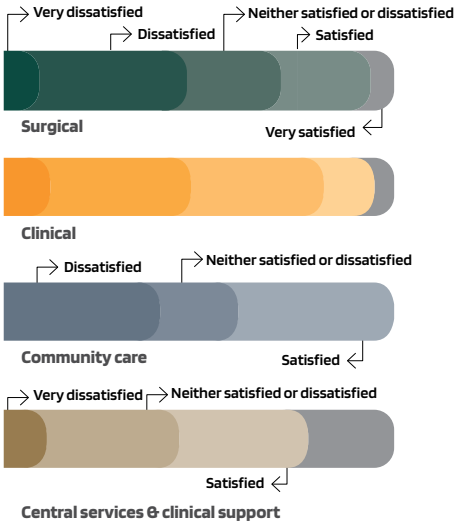
AGE



AVG AGE • **30 YEARS**

4. HOURS & SATISFACTION





- **Average working time in the Czechia was 58 hours/week, exceeding the EWTD limits. A total of 79% of doctors still did 24-hour shifts, with 4 nights/month on average. Only 6 rest days/month were reported, and 16% could not take 4 weeks of annual leave. Residents working ≥ 48 hours/week consistently reported worse satisfaction.**

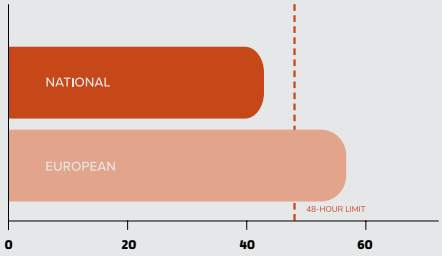
IMMEDIATE PRIORITY

- **Progressive reduction of 24-hour duties and night shifts as well as EWTD compliance.**

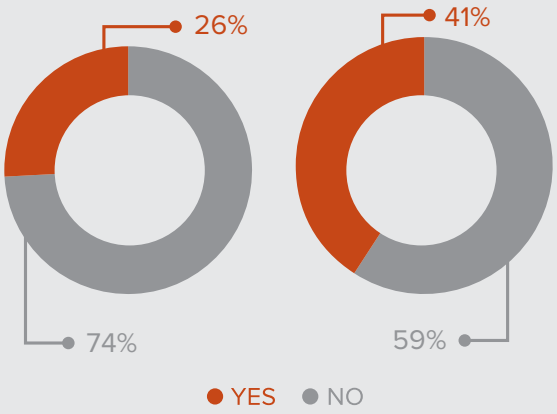
ESTONIA

1. WORKING TIME

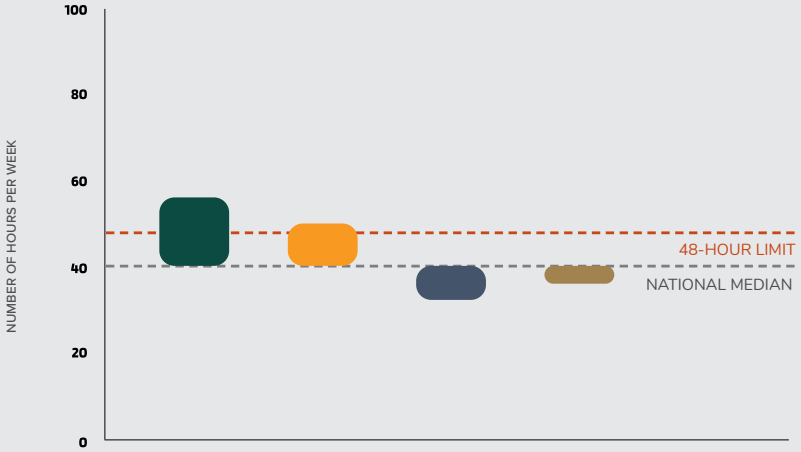
43 HOURS PER WEEK



NUMBER OF HOURS PER WEEK

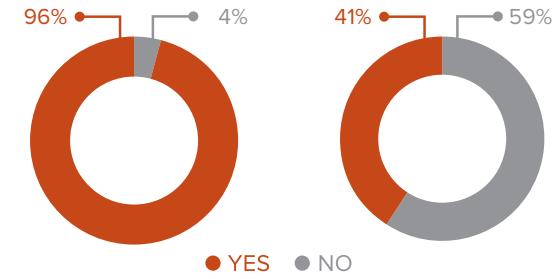


24-HOUR SHIFTS NIGHT SHIFTS



SURGICAL, CLINICAL, COMMUNITY CARE AND CENTRAL SERVICES & CLINICAL SUPPORT

2. RESTING TIME



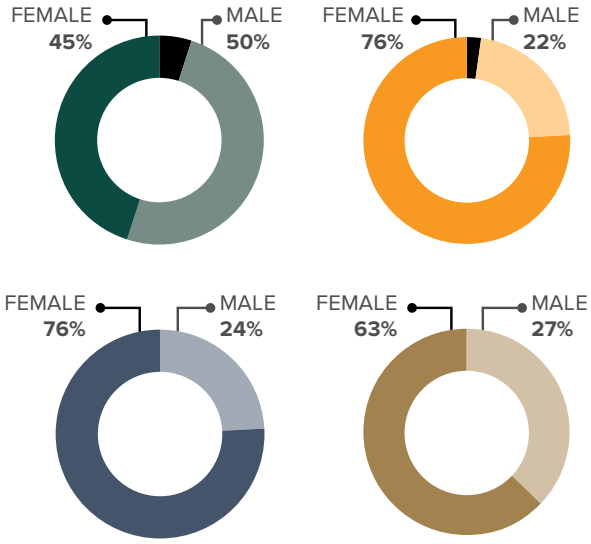
DAY OF REST PER WEEK ANNUAL LEAVE

8
DAYS OF REST PER MONTH

3
NIGHT SHIFTS PER MONTH

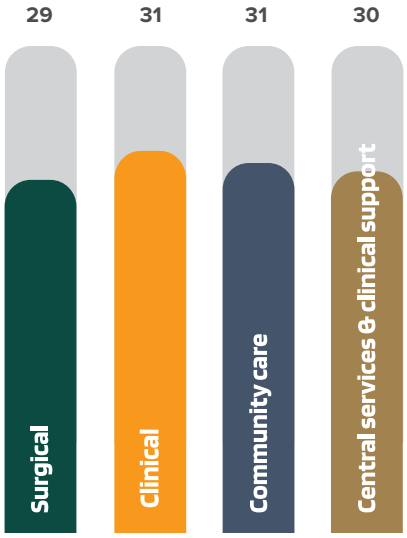
3. DEMOGRAPHICS

GENDER



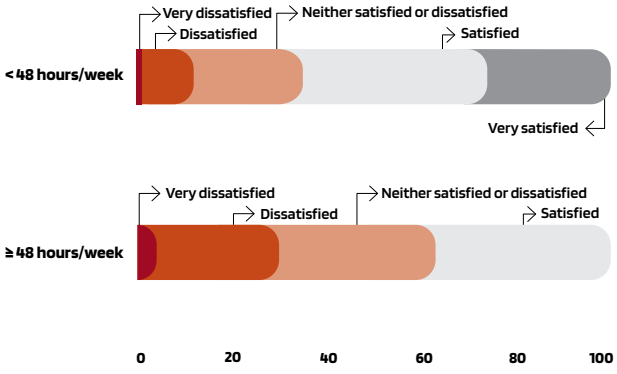
AVG FEMALE • **68%**

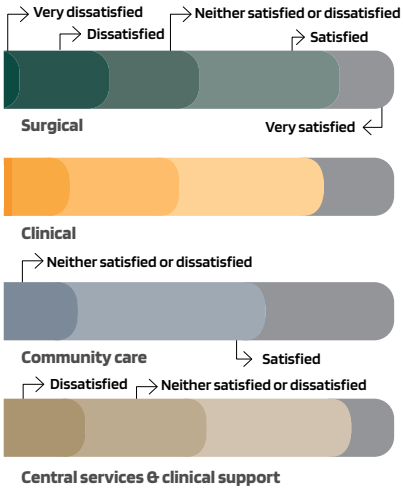
AGE



AVG AGE • **30 YEARS**

4. HOURS & SATISFACTION





- **Estonian junior doctors reported 43 hours/week of average working time, the country with the best results on the sample. One fourth (26%) of respondents reported 24-hour shifts and doctors worked on average 3 nights/month. Rest averaged 8 days/month, but 59% missed the 4 weeks of annual leave. Even at lower number of hours, satisfaction significantly dropped in those working ≥ 48 hours/week.**

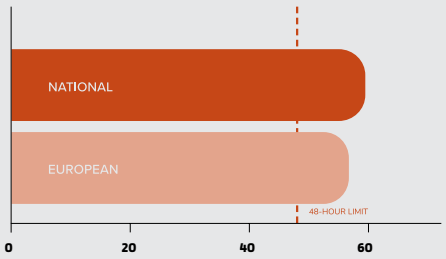
IMMEDIATE PRIORITY

- **An example of good practices with margin for improvement in relation to annual leave uptake.**

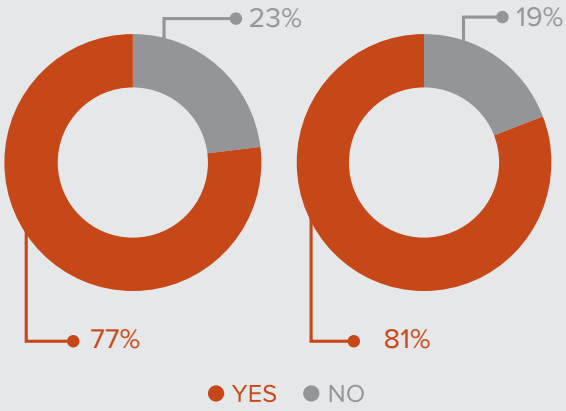
FRANCE

1. WORKING TIME

59 HOURS PER WEEK

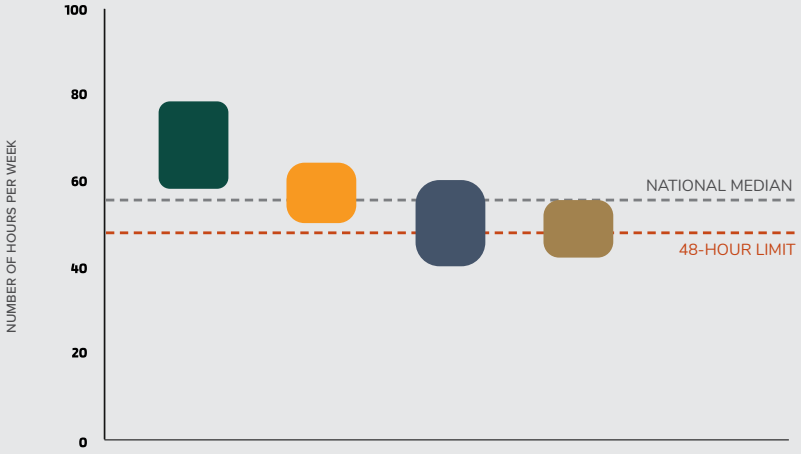


NUMBER OF HOURS PER WEEK



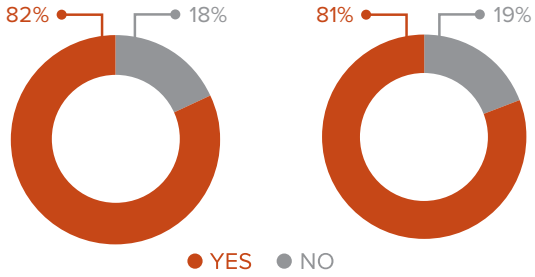
24-HOUR SHIFTS

NIGHT SHIFTS



SURGICAL, CLINICAL, COMMUNITY CARE AND CENTRAL SERVICES & CLINICAL SUPPORT

2. RESTING TIME



DAY OF REST PER WEEK

ANNUAL LEAVE

6

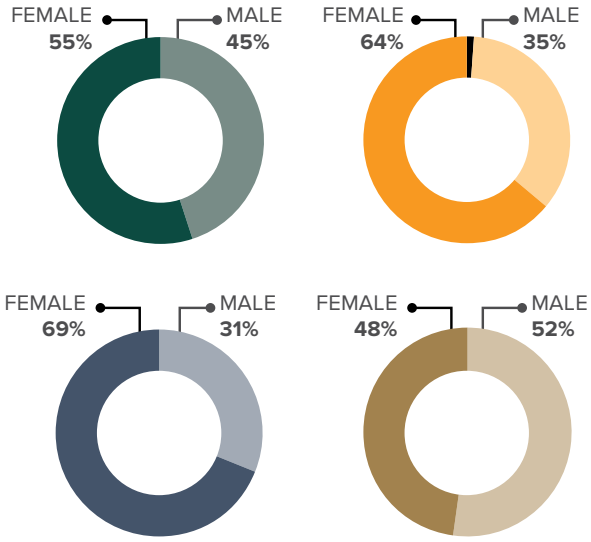
DAYS OF REST PER MONTH

4

NIGHT SHIFTS PER MONTH

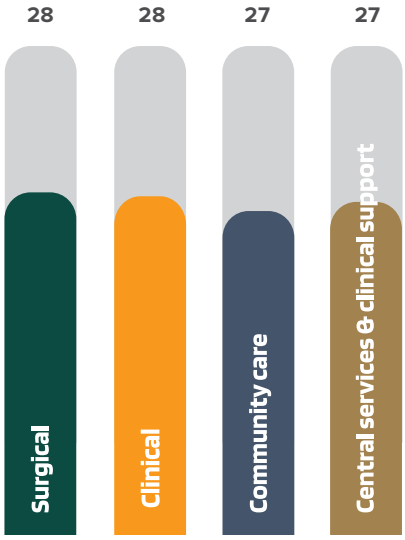
3. DEMOGRAPHICS

GENDER



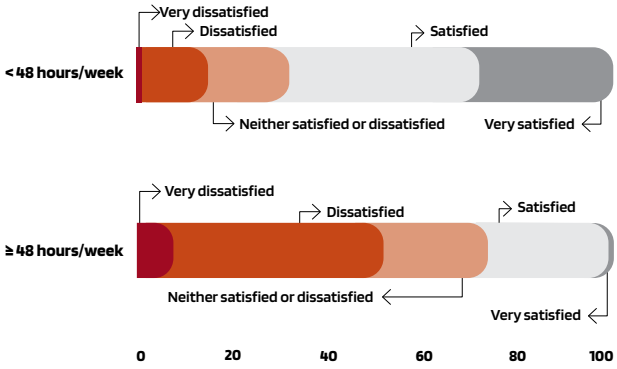
AVG FEMALE • **61%**

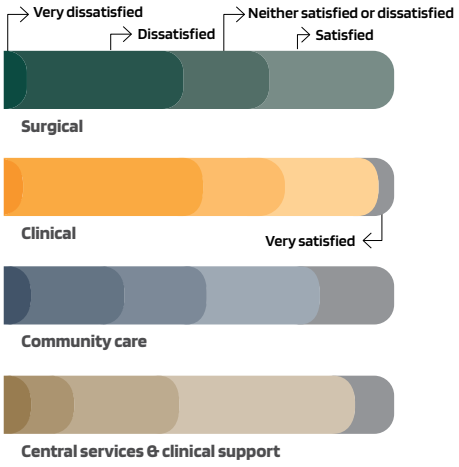
AGE



AVG AGE • **28 YEARS**

4. HOURS & SATISFACTION





- In France, junior doctors worked an average of **59 hours/week**, breaching the EWTD. Nearly 4 out of 5 **(77%)** reported 24-hour shifts and **81%** work night shifts, with an average of 4 nights/month. They had **6 rest days/month**, while **19%** could not take 4 weeks of annual leave. Satisfaction declined markedly in the group working beyond 48 hours/week.

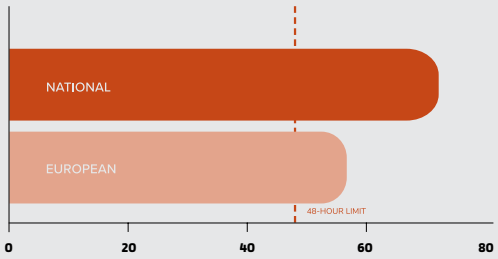
IMMEDIATE PRIORITY

- Progressive reduction of 24-hour duties and night shifts as well as EWTD compliance.

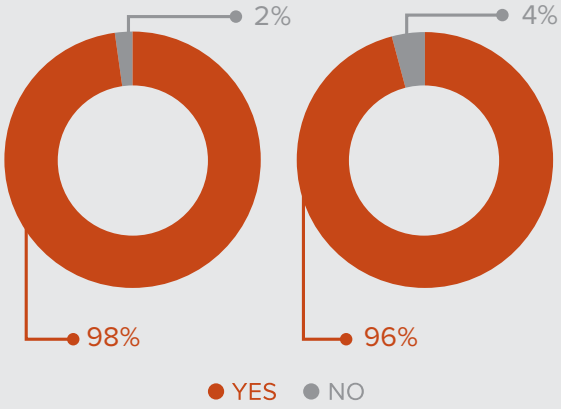
GREECE

1. WORKING TIME

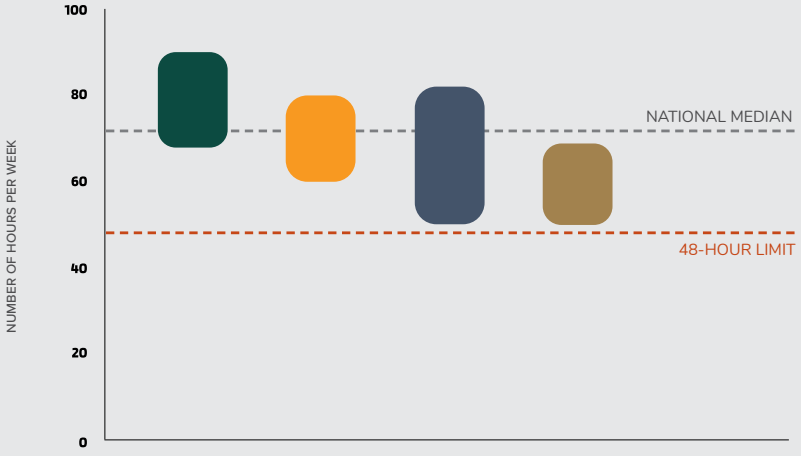
72 HOURS PER WEEK



NUMBER OF HOURS PER WEEK

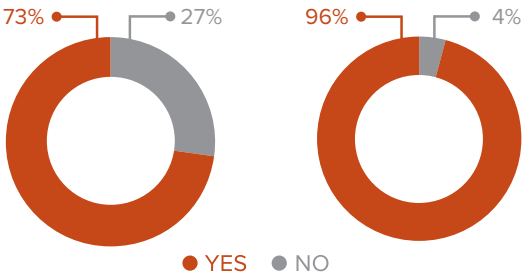


24-HOUR SHIFTS NIGHT SHIFTS



SURGICAL, CLINICAL, COMMUNITY CARE AND CENTRAL SERVICES & CLINICAL SUPPORT

2. RESTING TIME



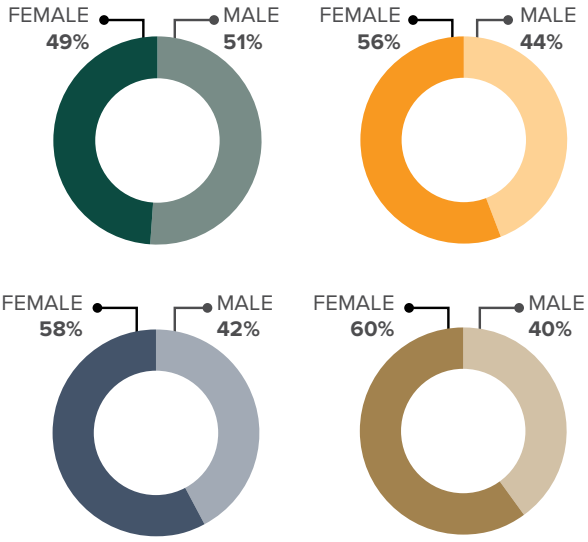
DAY OF REST PER WEEK ANNUAL LEAVE

4 DAYS OF REST PER MONTH

7 NIGHT SHIFTS PER MONTH

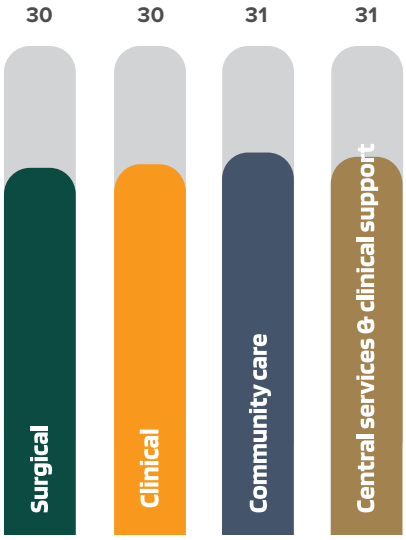
3. DEMOGRAPHICS

GENDER



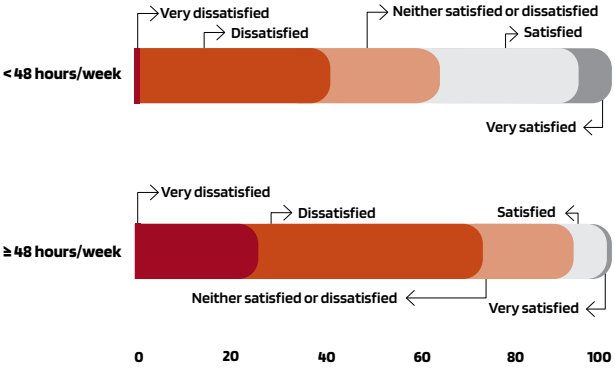
AVG FEMALE • **54%**

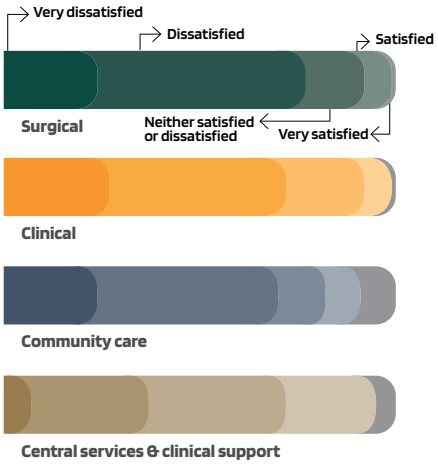
AGE



AVG AGE • **30 YEARS**

4. HOURS & SATISFACTION





- **Greek junior doctors face extreme conditions, with an average working time of 72 hours/week – the highest workload of all the surveyed countries. Nearly all junior doctors undertook 24-hour shifts (98%) and night shifts (96%), with an average of 7 nights/month. Rest was minimal (4 days/month), however only 4% lacked the 4 weeks of annual leave. As across Europe, doctors working ≥ 48 hours/week reported much worse satisfaction. This was among the harshest profiles in Europe.**

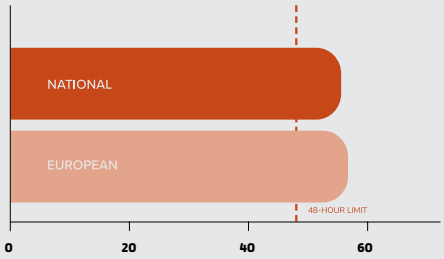
IMMEDIATE PRIORITY

- **Immediate compliance with European law on hours and rest.**

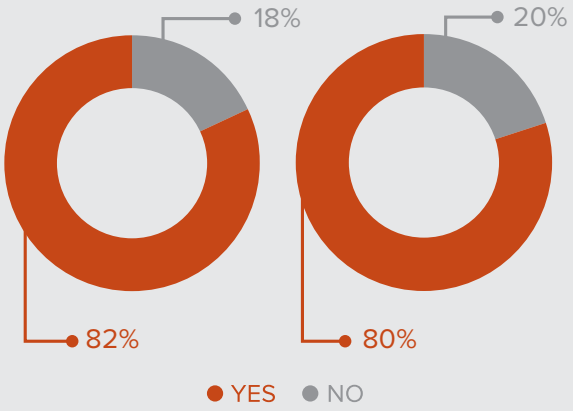
HUNGARY

1. WORKING TIME

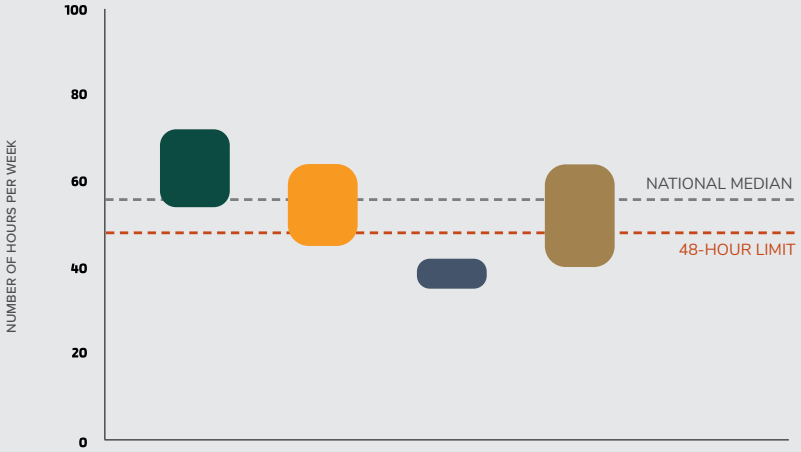
56 HOURS PER WEEK



NUMBER OF HOURS PER WEEK

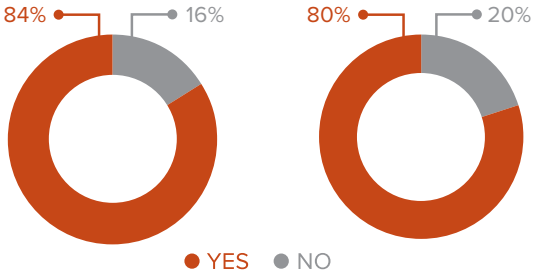


24-HOUR SHIFTS NIGHT SHIFTS



SURGICAL, CLINICAL, COMMUNITY CARE AND CENTRAL SERVICES & CLINICAL SUPPORT

2. RESTING TIME



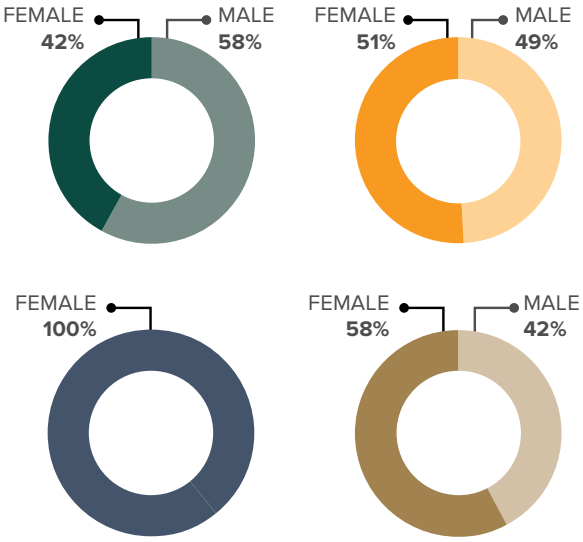
DAY OF REST PER WEEK ANNUAL LEAVE

6
DAYS OF REST PER MONTH

5
NIGHT SHIFTS PER MONTH

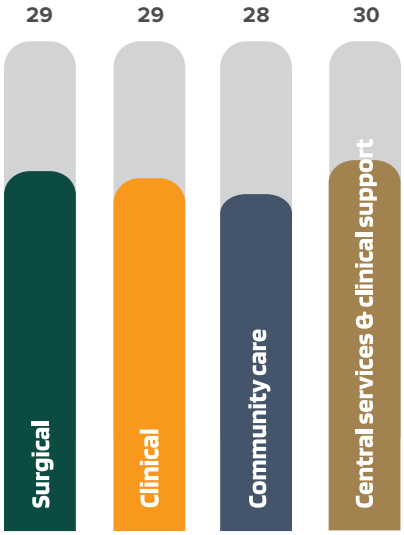
3. DEMOGRAPHICS

GENDER



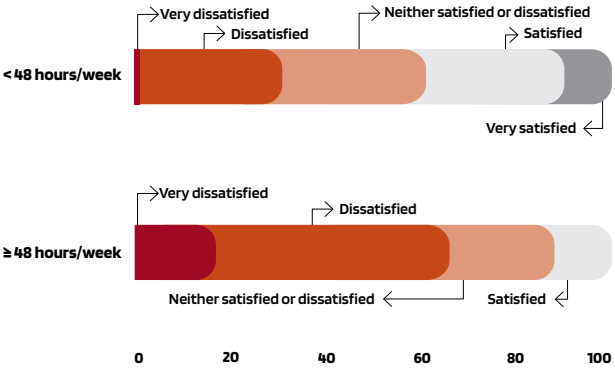
AVG FEMALE • **50%**

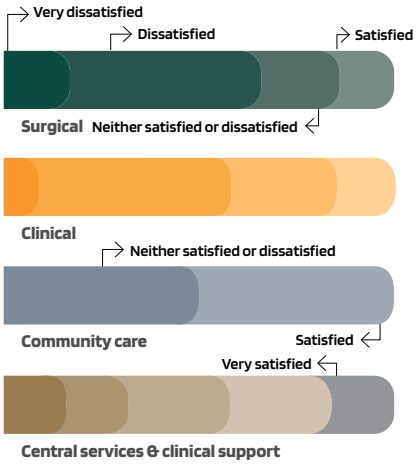
AGE



AVG AGE • **29 YEARS**

4. HOURS & SATISFACTION





- **Average working time in Hungary was 56 hours/week, over the EWTD limits. A total of 82% performed 24-hour shifts and respondents reported working 5 nights/month. Rest averaged 6 days/month, with 20% unable to take 4 weeks of annual leave. Those working ≥ 48 hours/week reported much lower satisfaction.**

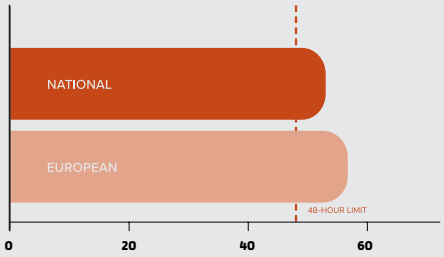
IMMEDIATE PRIORITY

- **Implement mandatory rota oversight to reduce excessive duties.**

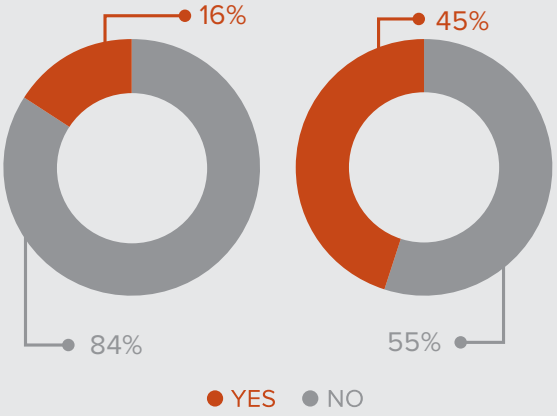
ITALY

1. WORKING TIME

53 HOURS PER WEEK

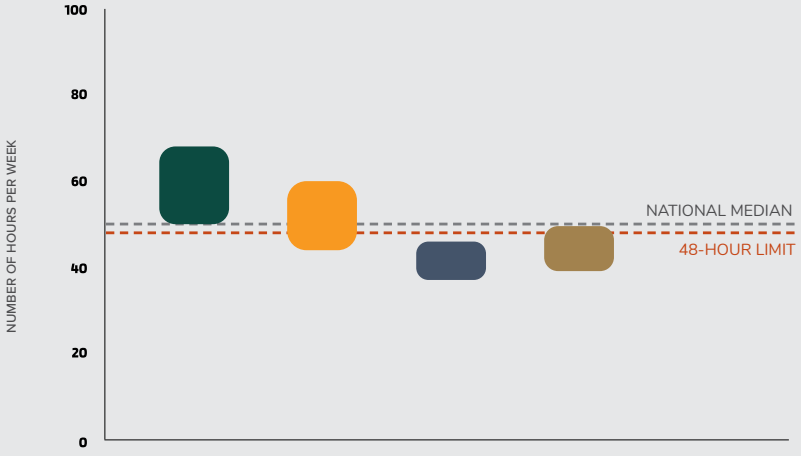


NUMBER OF HOURS PER WEEK



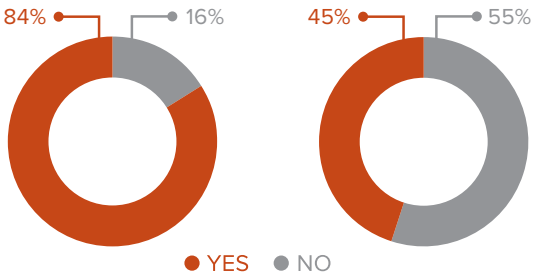
24-HOUR SHIFTS

NIGHT SHIFTS



SURGICAL, CLINICAL, COMMUNITY CARE AND CENTRAL SERVICES & CLINICAL SUPPORT

2. RESTING TIME



DAY OF REST PER WEEK

ANNUAL LEAVE

5

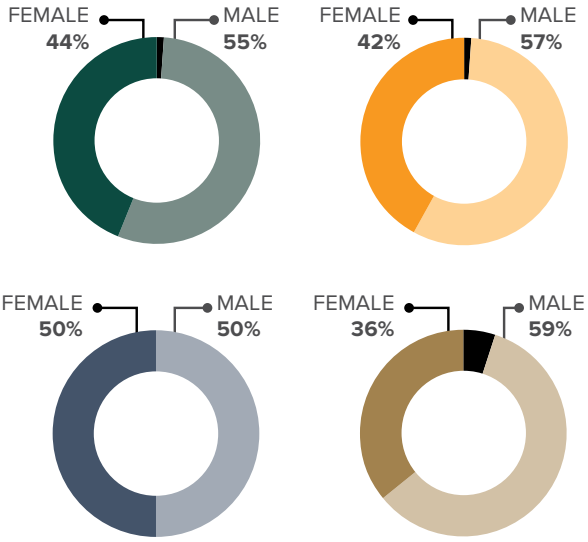
DAYS OF REST PER MONTH

3

NIGHT SHIFTS PER MONTH

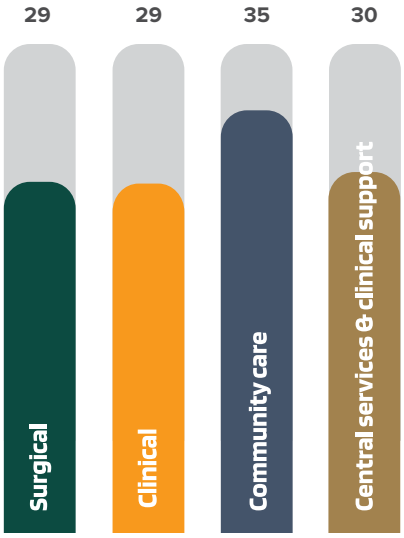
3. DEMOGRAPHICS

GENDER



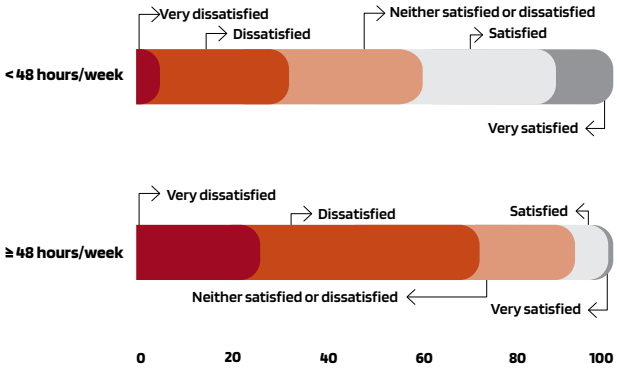
AVG FEMALE • **43%**

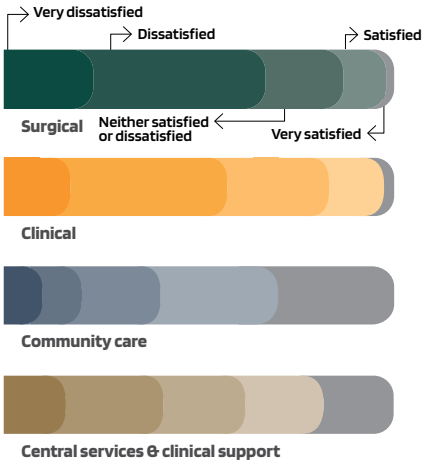
AGE



AVG AGE • **29 YEARS**

4. HOURS & SATISFACTION





- Italian junior doctors reported **53 hours/week** of average workload. A total of **16%** worked 24-hour shifts and **45%** undertook night shifts, with an average of **3 nights/month**. Only **5 rest days/month** were guaranteed, and **55%** missed the 4 weeks of annual leave. Work-life balance deteriorated in those working beyond 48 hours/week.

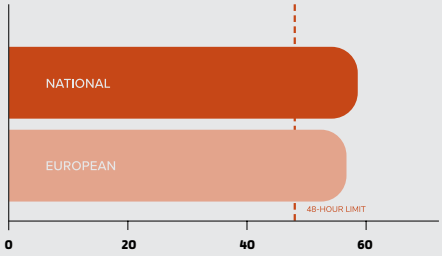
IMMEDIATE PRIORITY

- Enforce rest entitlements and annual leave, slight decrease of average working hours to ensure EWTD compliance.

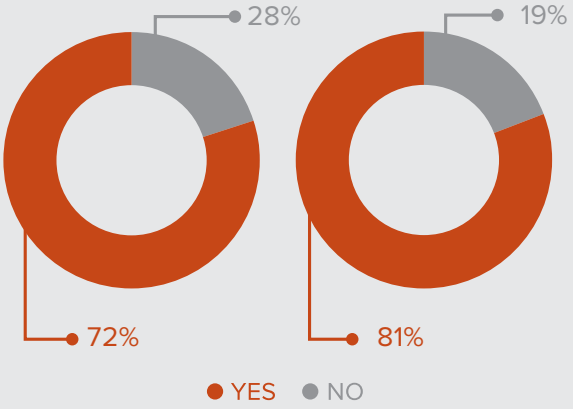
LATVIA

1. WORKING TIME

59 HOURS PER WEEK

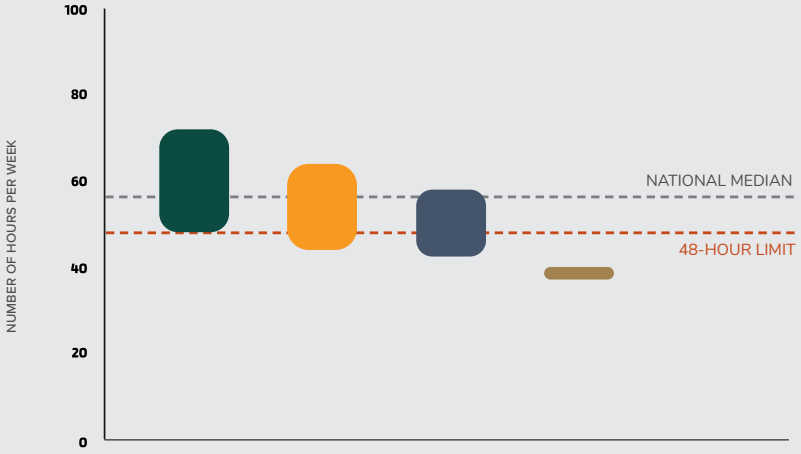


NUMBER OF HOURS PER WEEK



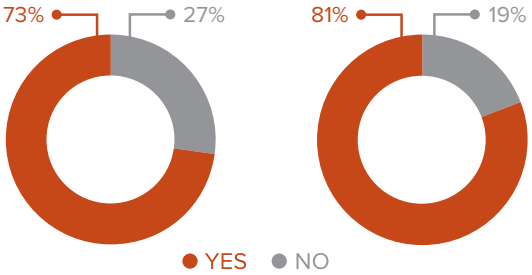
24-HOUR SHIFTS

NIGHT SHIFTS



SURGICAL, CLINICAL, COMMUNITY CARE AND CENTRAL SERVICES & CLINICAL SUPPORT

2. RESTING TIME



DAY OF REST PER WEEK

ANNUAL LEAVE

5

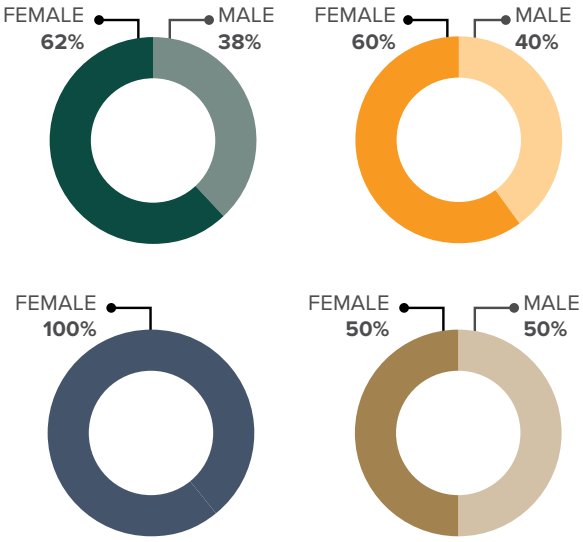
DAYS OF REST PER MONTH

5

NIGHT SHIFTS PER MONTH

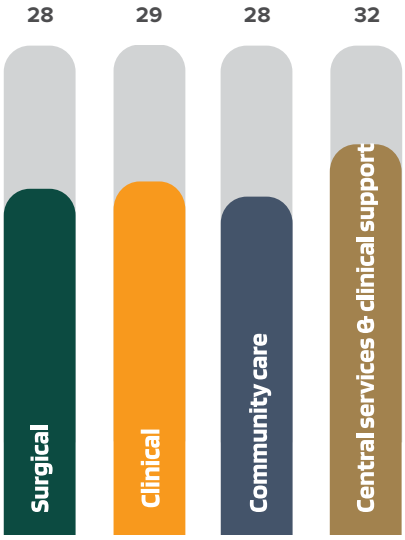
3. DEMOGRAPHICS

GENDER



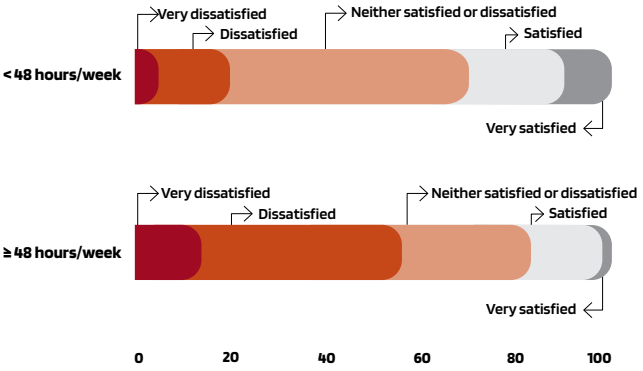
AVG FEMALE • **63%**

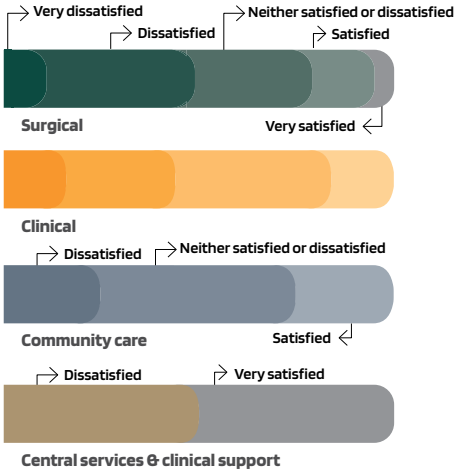
AGE



AVG AGE • **29 YEARS**

4. HOURS & SATISFACTION





- **Latvian junior doctors reported 59 hours/week of average working time. Most doctors performed 24-hour shifts (72%) and night shifts (81%), with an average of 5 nights/month. Rest averaged 5 days/month and 19% lacked the 4 weeks of annual leave. Those working ≥48 hours/week displayed lower satisfaction.**

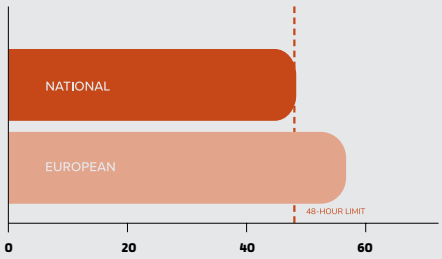
IMMEDIATE PRIORITY

- **EWTD-compliance, protect annual leave and reduce night burden.**

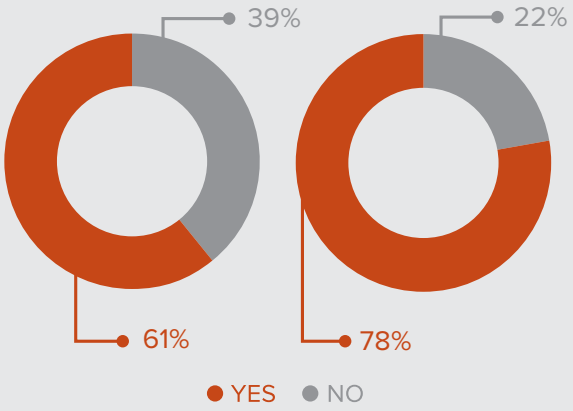
LITHUANIA

1. WORKING TIME

48 HOURS PER WEEK

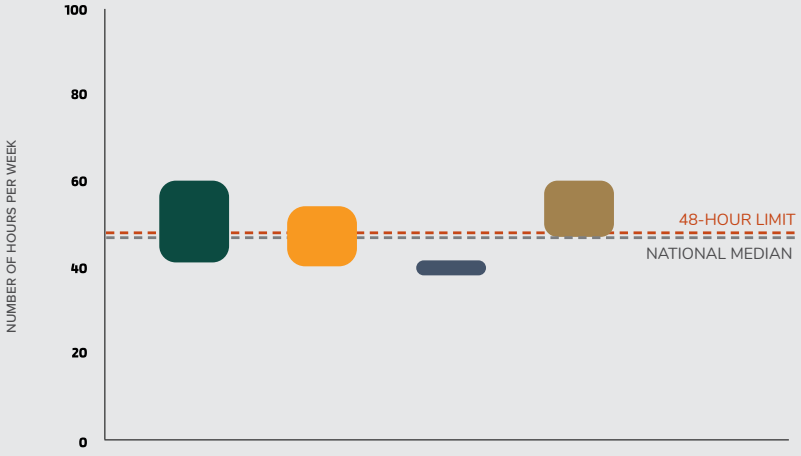


NUMBER OF HOURS PER WEEK



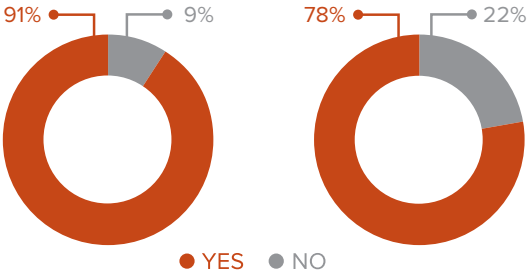
24-HOUR SHIFTS

NIGHT SHIFTS



SURGICAL, CLINICAL, COMMUNITY CARE AND CENTRAL SERVICES & CLINICAL SUPPORT

2. RESTING TIME



DAY OF REST PER WEEK

ANNUAL LEAVE

6

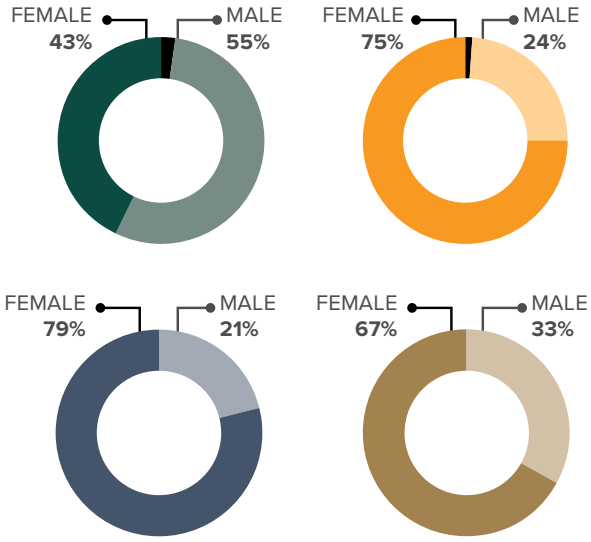
DAYS OF REST PER MONTH

4

NIGHT SHIFTS PER MONTH

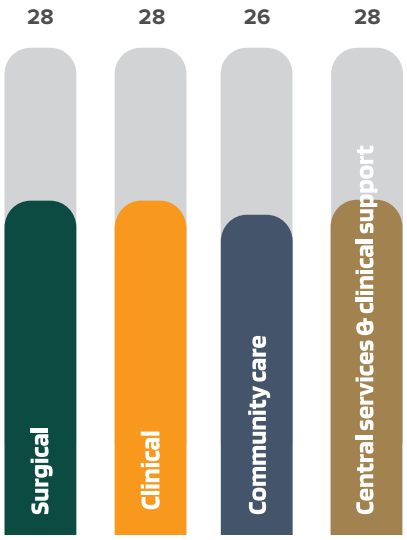
3. DEMOGRAPHICS

GENDER



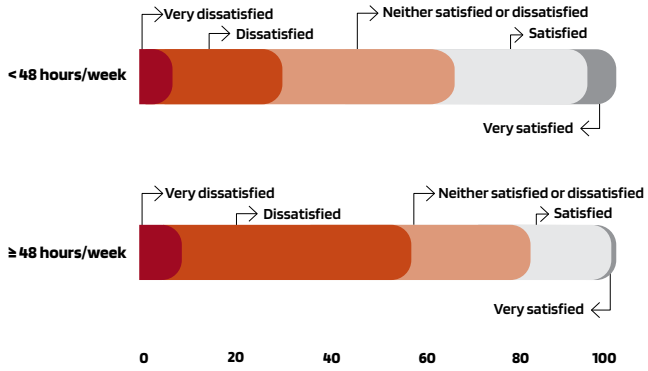
AVG FEMALE • **67%**

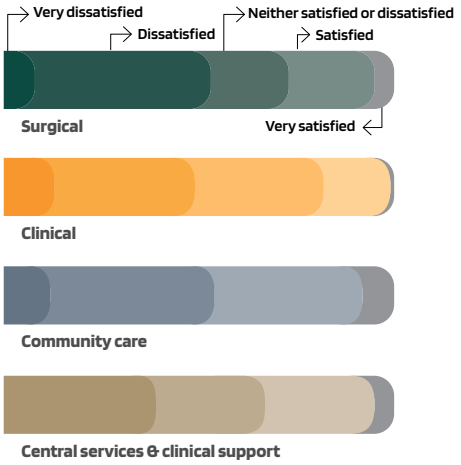
AGE



AVG AGE • **27 YEARS**

4. HOURS & SATISFACTION





- **Mean working hours in Lithuania were 48 hours/week, reaching the limit set by the EWTD. A total of 61% reported 24-hour shifts and doctors worked an average of 4 nights/month. Rest stood at 6 days/month and 22% missed 4 weeks of annual leave. Dissatisfaction was higher in those working ≥ 48 hours/week.**

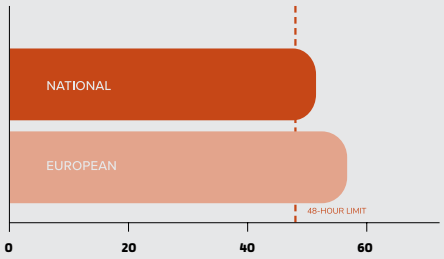
IMMEDIATE PRIORITY

- **Reduce length of shifts, ensure annual leave.**

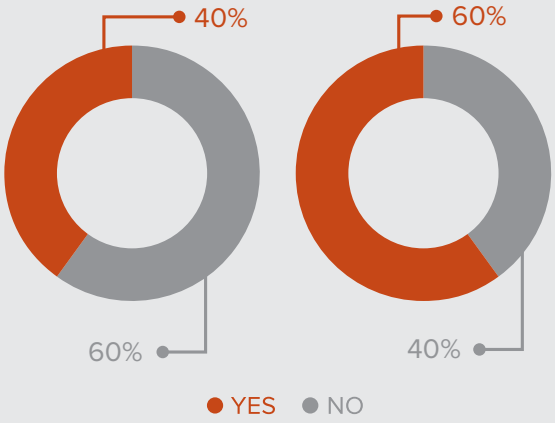
LUXEMBOURG

1. WORKING TIME

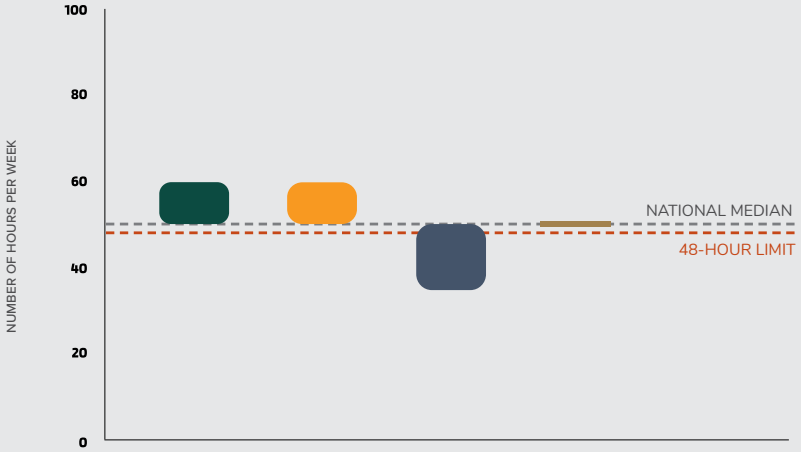
52 HOURS PER WEEK



NUMBER OF HOURS PER WEEK

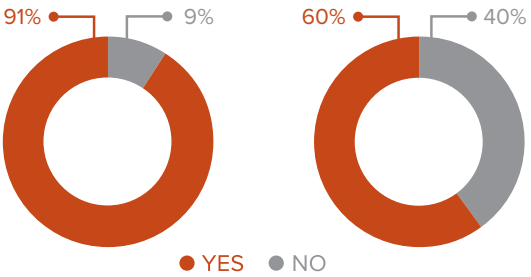


24-HOUR SHIFTS NIGHT SHIFTS



SURGICAL, CLINICAL, COMMUNITY CARE AND CENTRAL SERVICES & CLINICAL SUPPORT

2. RESTING TIME



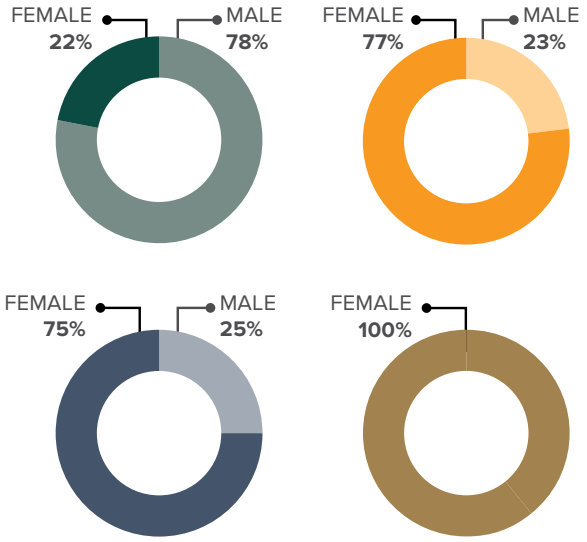
DAY OF REST PER WEEK ANNUAL LEAVE

6 DAYS OF REST PER MONTH

4 NIGHT SHIFTS PER MONTH

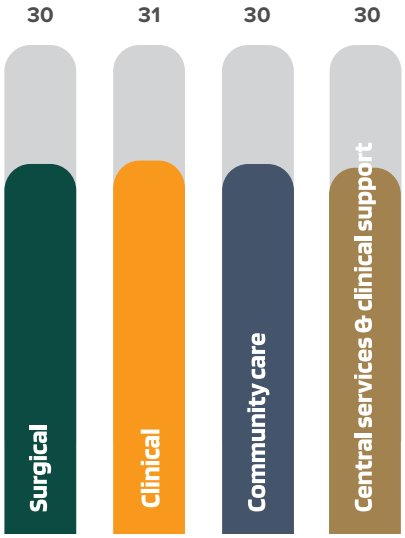
3. DEMOGRAPHICS

GENDER



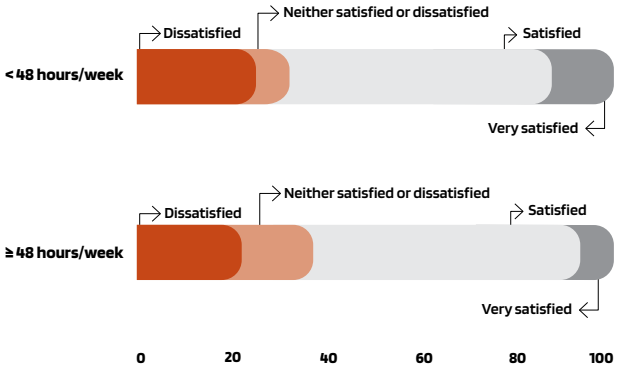
AVG FEMALE • **60%**

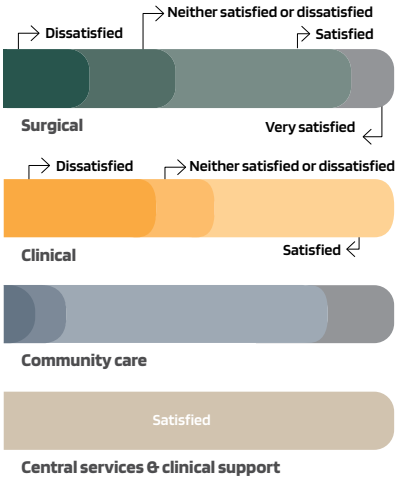
AGE



AVG AGE • **30 YEARS**

4. HOURS & SATISFACTION





- **Luxembourg demonstrated an average workload of 52 hours/week, slightly above the EWTD limits. A total of 40% performed 24-hour shifts and an average of 4 nights/month. Rest stood at 6 days/month and 40% did not take 4 weeks of annual leave.**

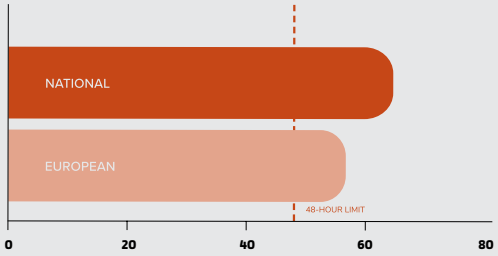
IMMEDIATE PRIORITY

- **Ensure consistent leave protection, slight reduction of working hours.**

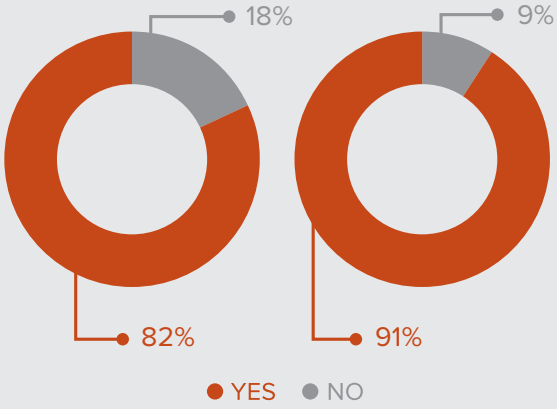
MALTA

1. WORKING TIME

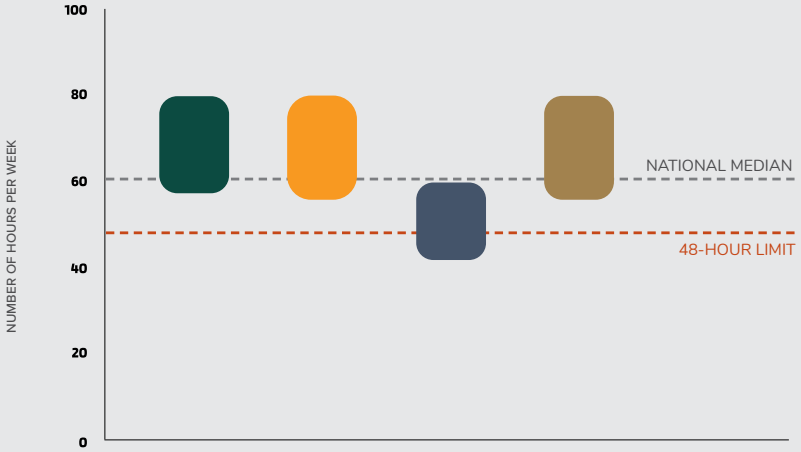
65 HOURS PER WEEK



NUMBER OF HOURS PER WEEK

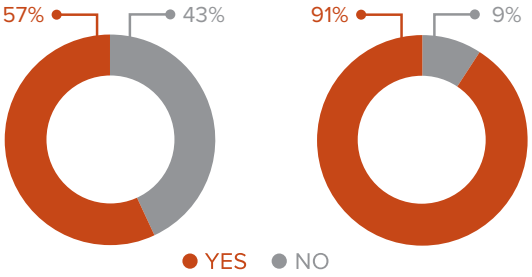


24-HOUR SHIFTS NIGHT SHIFTS



SURGICAL, CLINICAL, COMMUNITY CARE AND CENTRAL SERVICES & CLINICAL SUPPORT

2. RESTING TIME



DAY OF REST PER WEEK

ANNUAL LEAVE

4

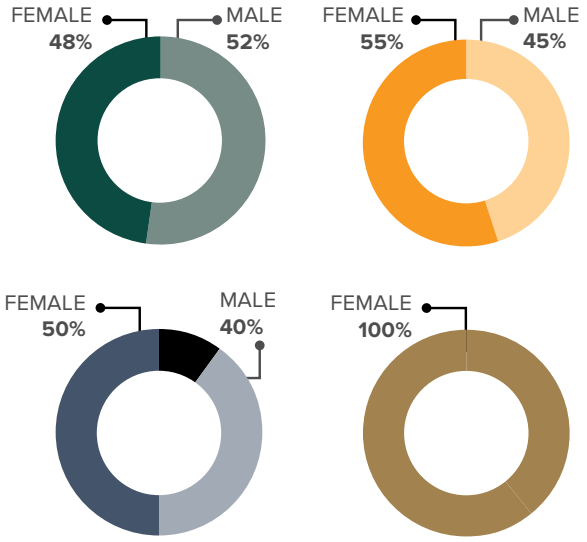
DAYS OF REST PER MONTH

6

NIGHT SHIFTS PER MONTH

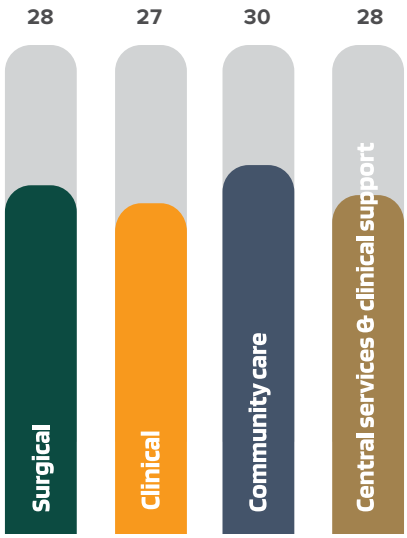
3. DEMOGRAPHICS

GENDER



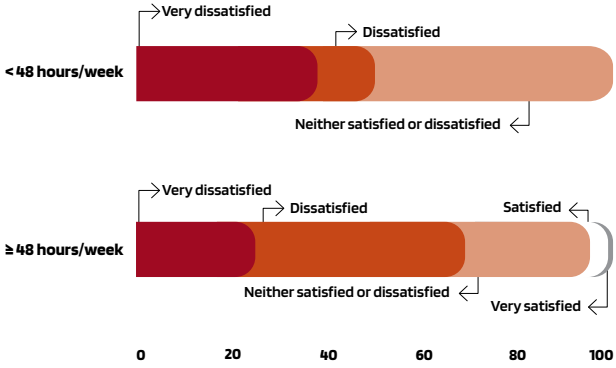
AVG FEMALE • **51%**

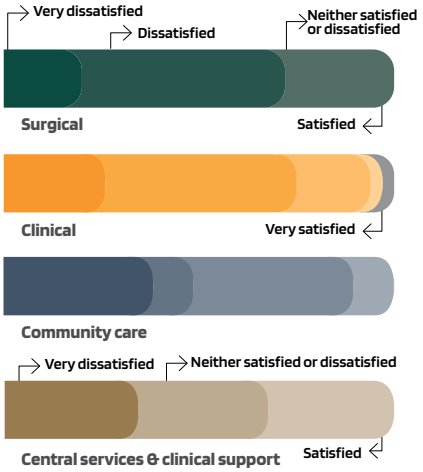
AGE



AVG AGE • **28 YEARS**

4. HOURS & SATISFACTION





- **Malta showed an average workload of 65 hours/week, with 82% of junior doctors undertaking 24-hour shifts. Night duties were present in 91% of doctors with an average of 6 nights/month. Rest was poor, at only 4 days/month, and 9% could not take 4 weeks of annual leave. Work-life satisfaction was among the lowest across all the surveyed countries.**

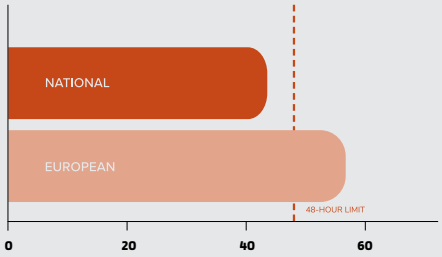
IMMEDIATE PRIORITY

- **EWTD-compliance, urgent rota reform and rest enforcement.**

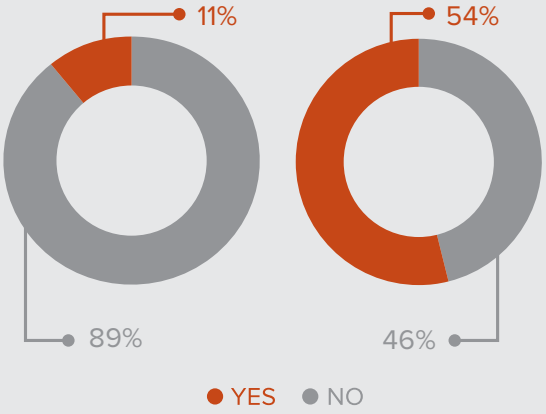
NETHERLANDS

1. WORKING TIME

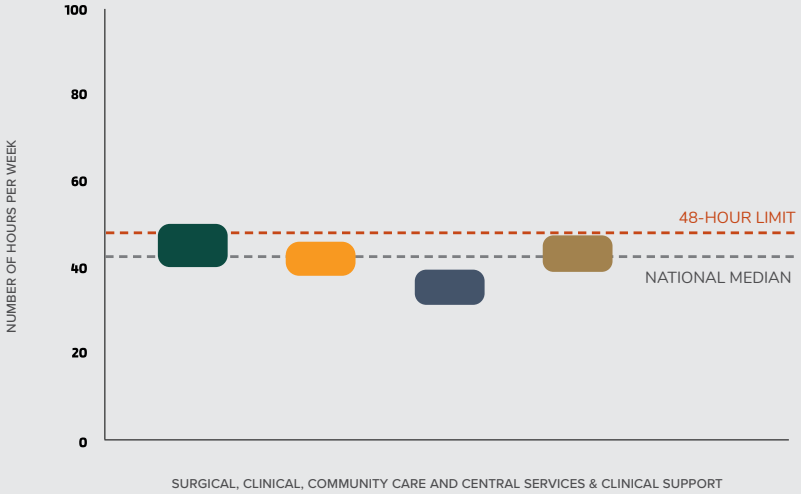
44 HOURS PER WEEK



NUMBER OF HOURS PER WEEK

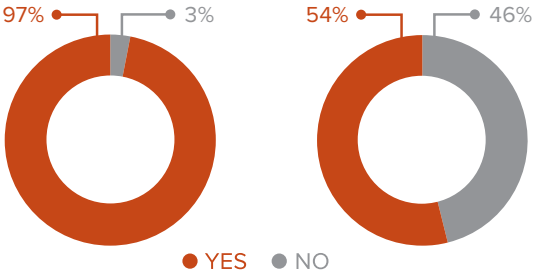


24-HOUR SHIFTS NIGHT SHIFTS



SURGICAL, CLINICAL, COMMUNITY CARE AND CENTRAL SERVICES & CLINICAL SUPPORT

2. RESTING TIME



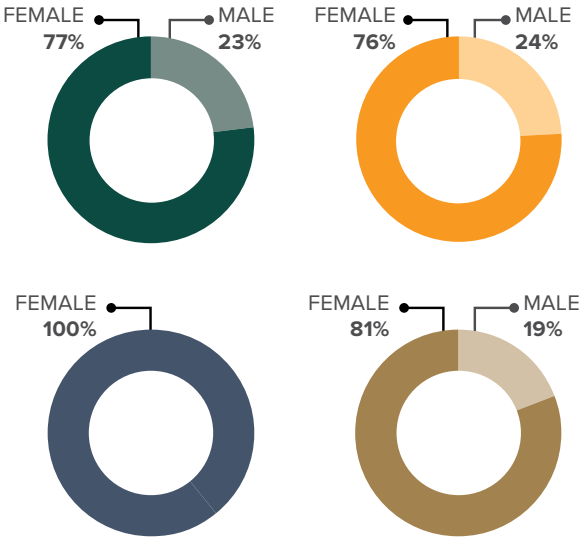
DAY OF REST PER WEEK ANNUAL LEAVE

9 DAYS OF REST PER MONTH

4 NIGHT SHIFTS PER MONTH

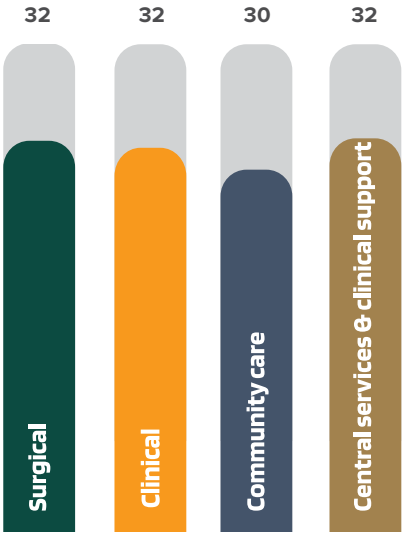
3. DEMOGRAPHICS

GENDER



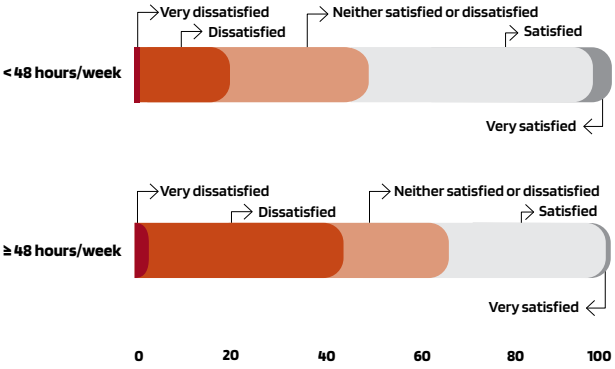
AVG FEMALE • **77%**

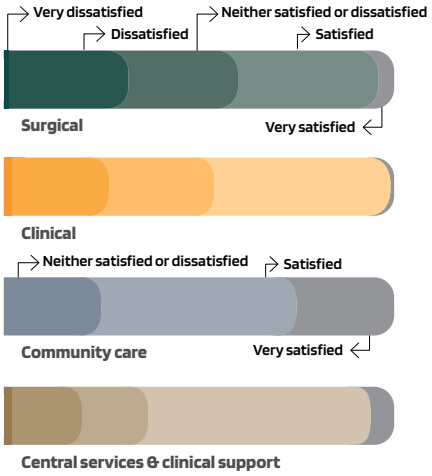
AGE



AVG AGE • **32 YEARS**

4. HOURS & SATISFACTION





- **Netherlands showed an average workload of 44 hours/week, one of the two countries in our study compliant with the EWTD. However, 11% of junior doctors still undertook 24-hour shifts and 54% worked night shifts, with an average of 4 nights/month. Rest averaged 9 days/month, but 46% did not take 4 weeks of annual leave. The impact on satisfaction was smaller but present, with doctors working ≥ 48 hours/week showing poorer work-life balance and higher dissatisfaction.**

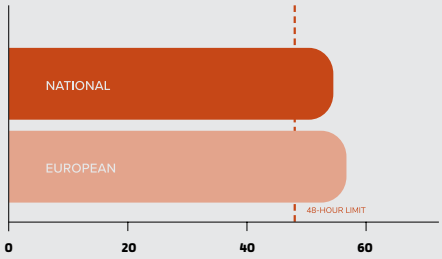
IMMEDIATE PRIORITY

- **Progressive reduction of night shifts and secure annual leave.**

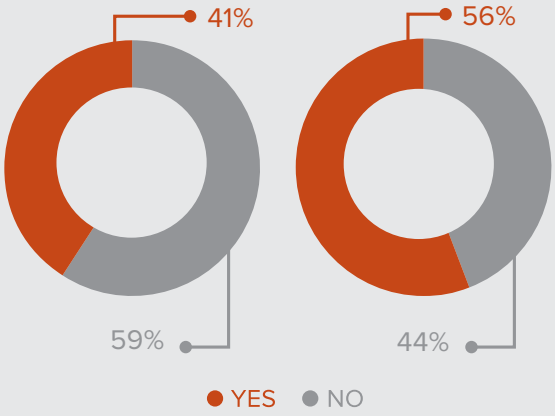
PORTUGAL

1. WORKING TIME

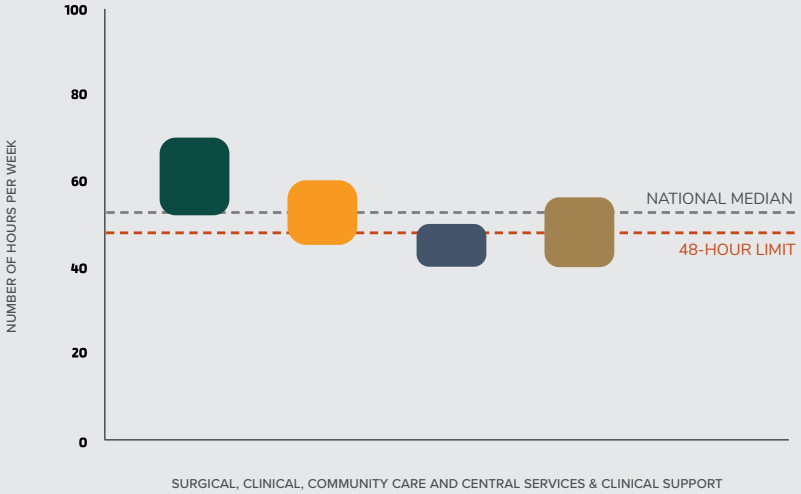
55 HOURS PER WEEK



NUMBER OF HOURS PER WEEK

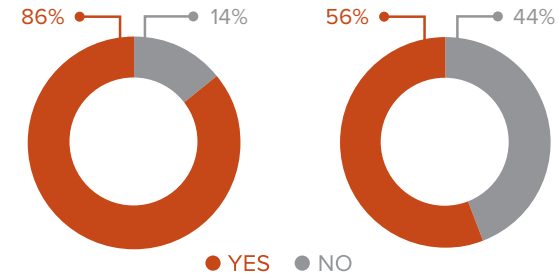


24-HOUR SHIFTS NIGHT SHIFTS



SURGICAL, CLINICAL, COMMUNITY CARE AND CENTRAL SERVICES & CLINICAL SUPPORT

2. RESTING TIME



DAY OF REST PER WEEK ANNUAL LEAVE

6

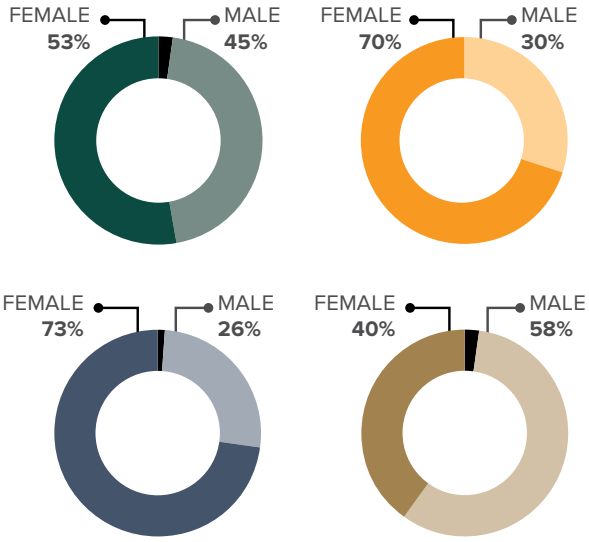
DAYS OF REST PER MONTH

4

NIGHT SHIFTS PER MONTH

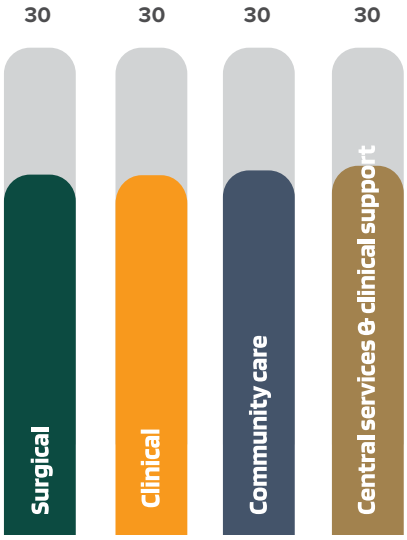
3. DEMOGRAPHICS

GENDER



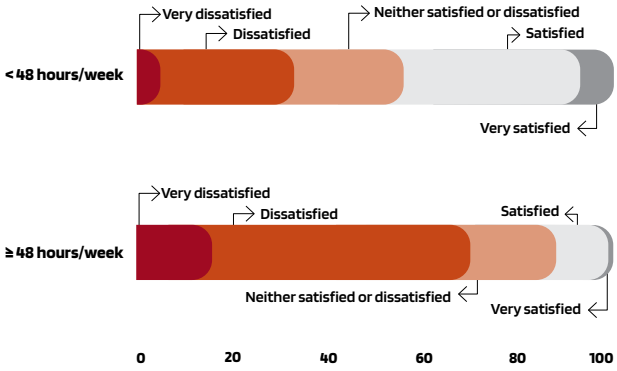
AVG FEMALE • **64%**

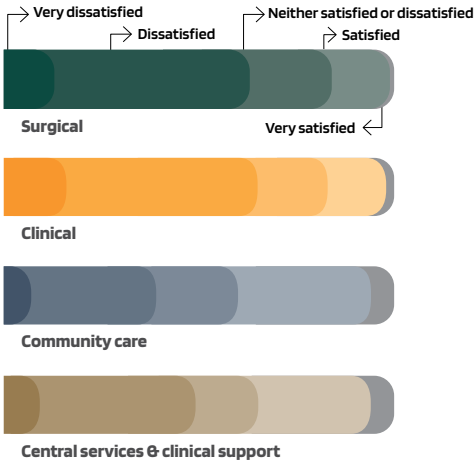
AGE



AVG AGE • **30 YEARS**

4. HOURS & SATISFACTION





- **Average working time in Portugal was 55 hours/week, clearly above the EWTD limits. Nearly half (41%) reported working 24-hour shifts and most doctors (56%) worked night shifts, with an average of 4 nights/month. Rest was limited (6 days/month) and 44% could not take the minimum 4 weeks of annual leave. Residents working ≥ 48 hours/week were extremely dissatisfied with their work-life balance.**

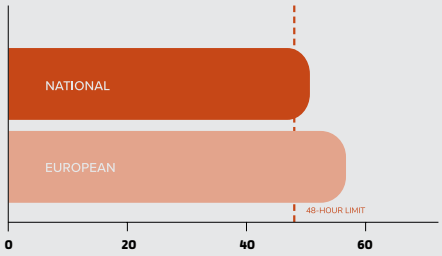
IMMEDIATE PRIORITY

- **Reduce working hours, implement effective rota monitoring and progressive reduction of night shifts and 24-hour duties.**

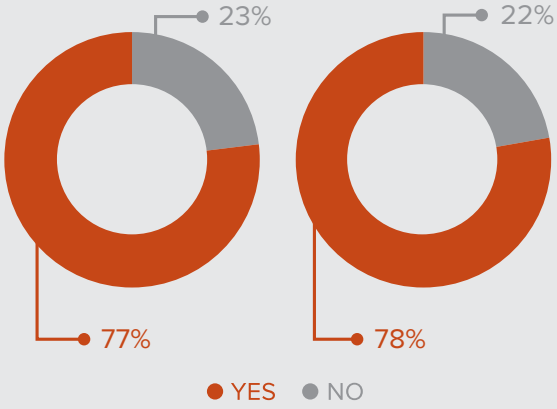
ROMANIA

1. WORKING TIME

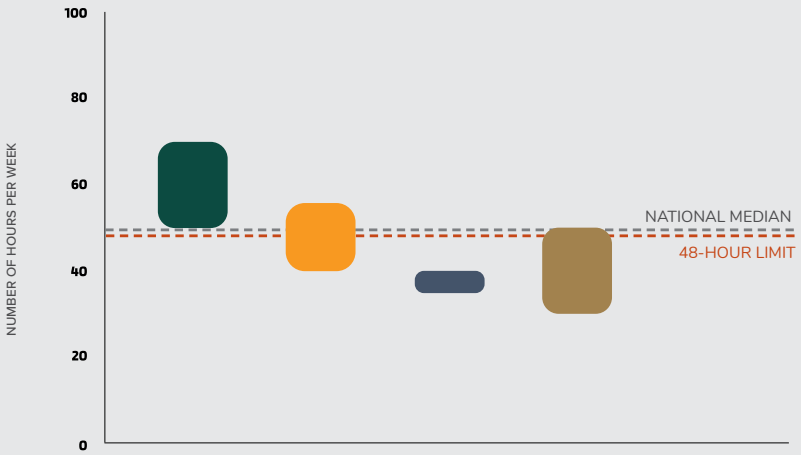
51 HOURS PER WEEK



NUMBER OF HOURS PER WEEK

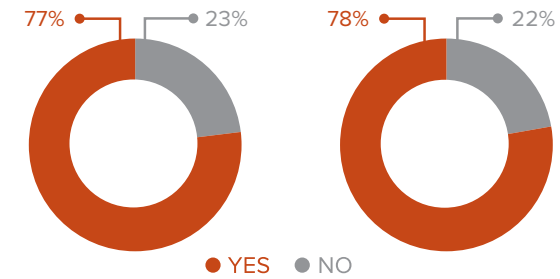


24-HOUR SHIFTS NIGHT SHIFTS



SURGICAL, CLINICAL, COMMUNITY CARE AND CENTRAL SERVICES & CLINICAL SUPPORT

2. RESTING TIME



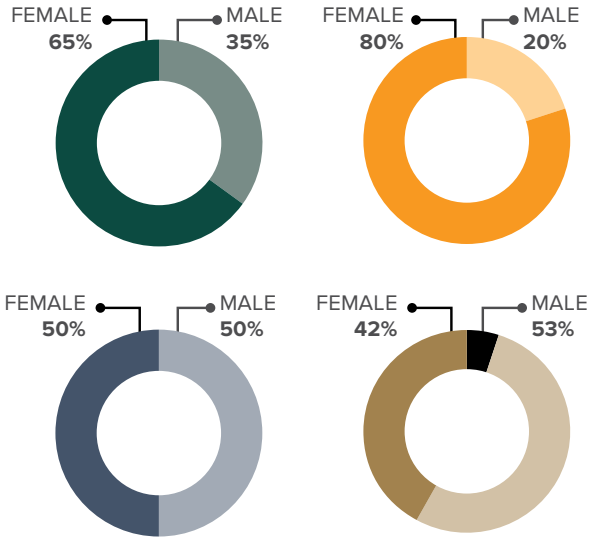
DAY OF REST PER WEEK ANNUAL LEAVE

5 DAYS OF REST PER MONTH

4 NIGHT SHIFTS PER MONTH

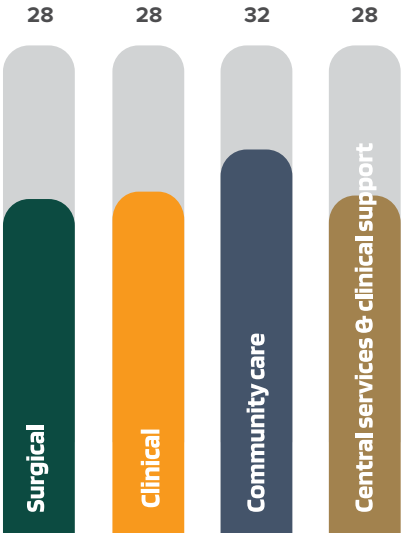
3. DEMOGRAPHICS

GENDER



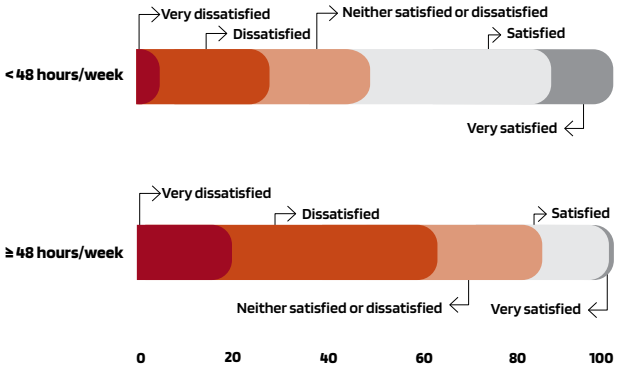
AVG FEMALE • **72%**

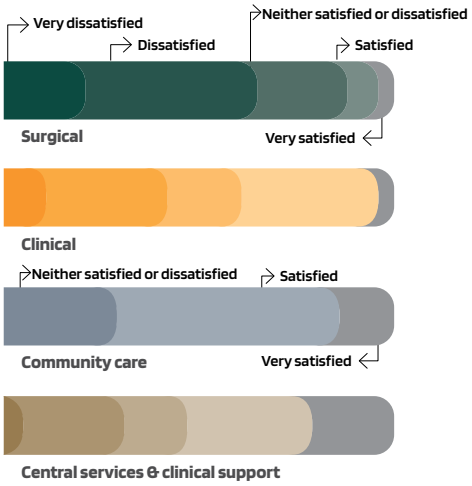
AGE



AVG AGE • **28 YEARS**

4. HOURS & SATISFACTION





- **Romania's junior doctors reported 51 hours/week as average working time. Nearly 4 in 5 performed 24-hour shifts (77%) and night shifts (78%), with an average of 4 nights/month. Rest was scarce at 5 days/month, and 22% did not get 4 weeks of annual leave. Satisfaction declined steeply in the group working ≥ 48 hours/week.**

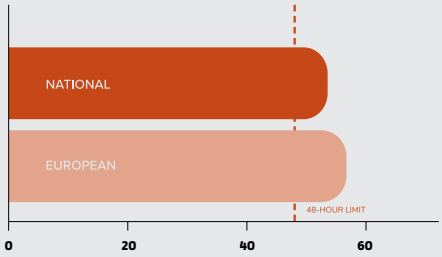
IMMEDIATE PRIORITY

- **Enforcement of the 48-hour cap, reduction of night shifts and enforcement of annual leave uptake.**

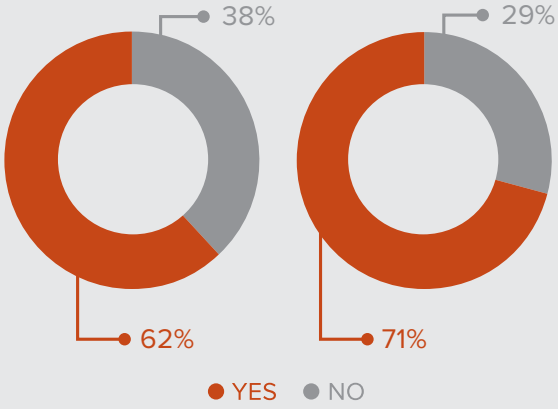
SLOVENIA

1. WORKING TIME

54 HOURS PER WEEK

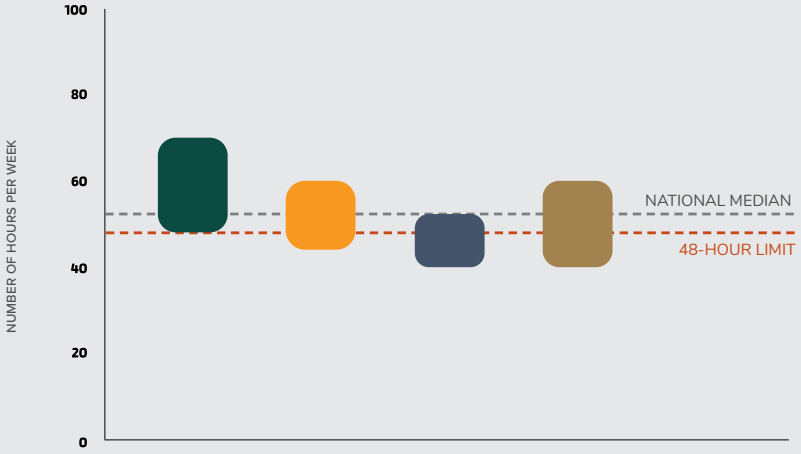


NUMBER OF HOURS PER WEEK



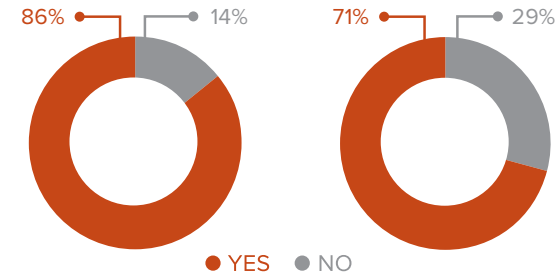
24-HOUR SHIFTS

NIGHT SHIFTS



SURGICAL, CLINICAL, COMMUNITY CARE AND CENTRAL SERVICES & CLINICAL SUPPORT

2. RESTING TIME



DAY OF REST PER WEEK

ANNUAL LEAVE

6

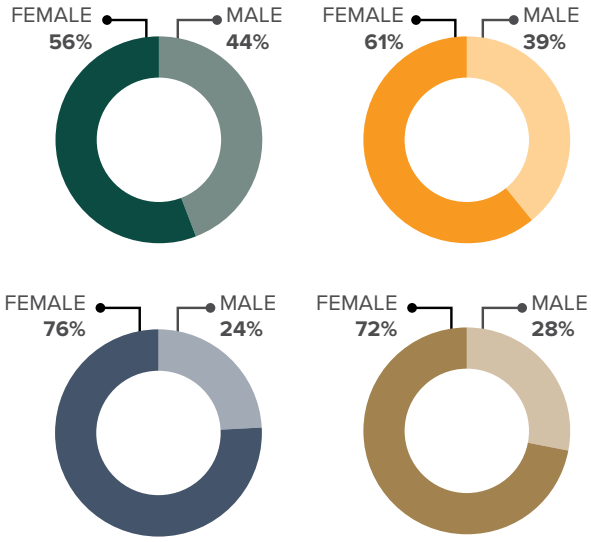
DAYS OF REST PER MONTH

4

NIGHT SHIFTS PER MONTH

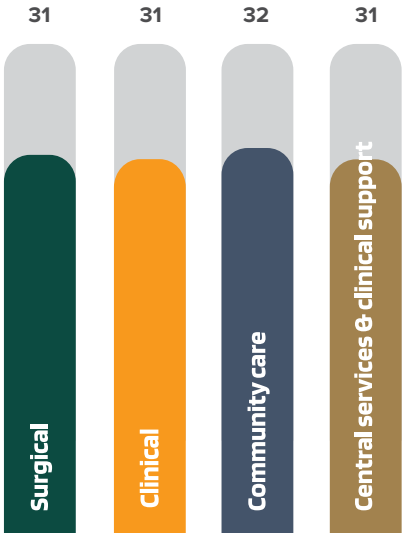
3. DEMOGRAPHICS

GENDER



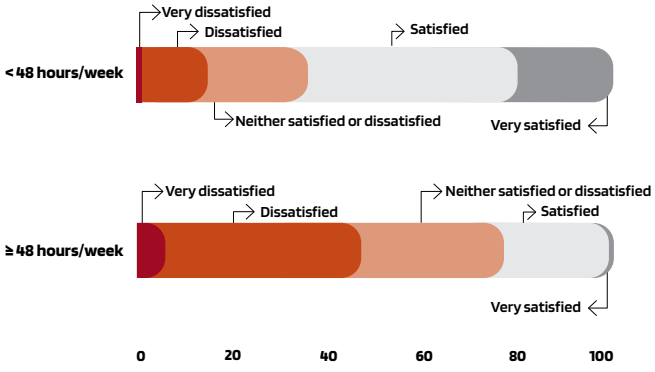
AVG FEMALE • **63%**

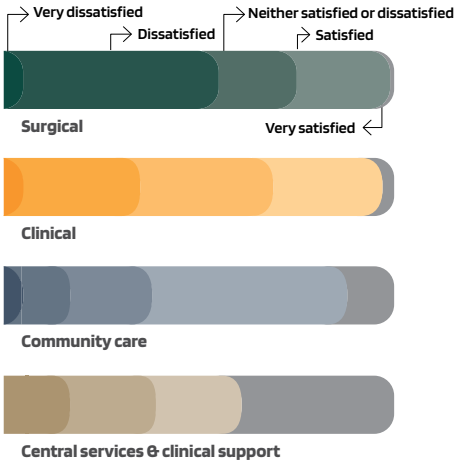
AGE



AVG AGE • **31 YEARS**

4. HOURS & SATISFACTION





- **Mean workload in Slovenia was 54 hours/week. A total of 62% of respondents worked 24-hour shifts and 5 nights/month. Residents reported 6 rest days/month, yet 29% lacked 4 weeks of annual leave. The extra working time in the group working ≥ 48 hours/week correlated with a marked increase in dissatisfaction.**

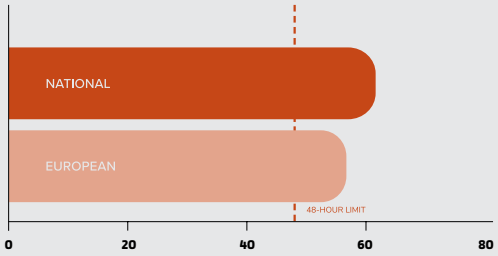
IMMEDIATE PRIORITY

- **EWTD-compliance and enforce reduction of night shifts and 24-hour shifts, guarantee annual leave and reduce shift length.**

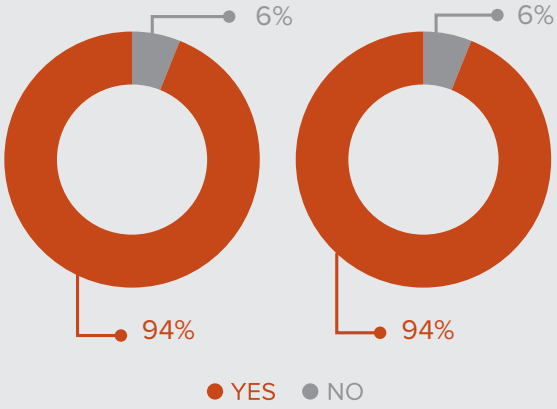
SPAIN

1. WORKING TIME

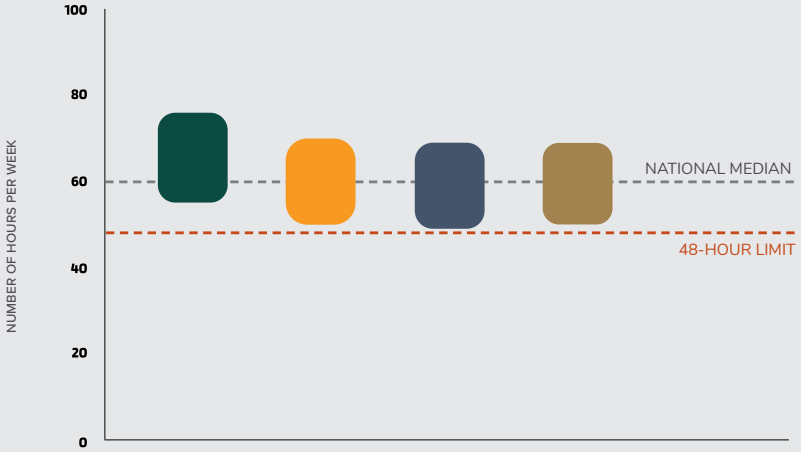
62 HOURS PER WEEK



NUMBER OF HOURS PER WEEK

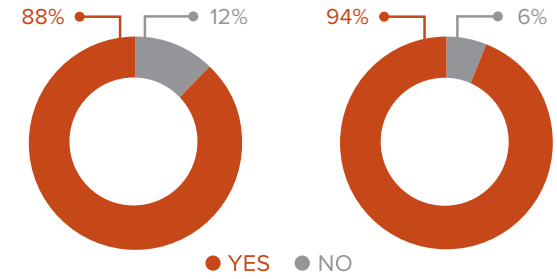


24-HOUR SHIFTS NIGHT SHIFTS



SURGICAL, CLINICAL, COMMUNITY CARE AND CENTRAL SERVICES & CLINICAL SUPPORT

2. RESTING TIME



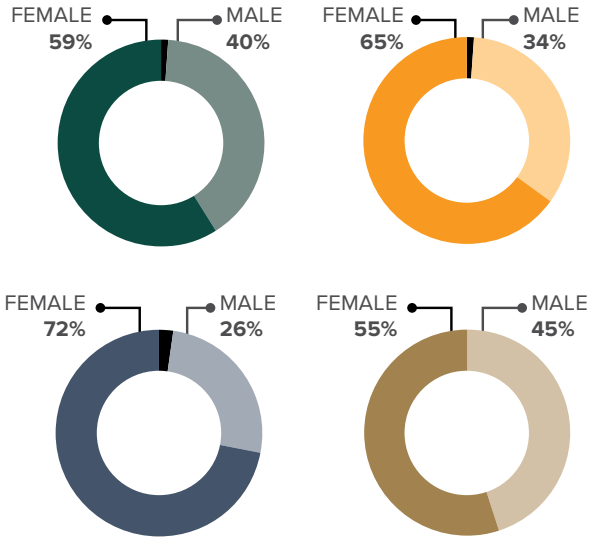
DAY OF REST PER WEEK ANNUAL LEAVE

6
DAYS OF REST PER MONTH

5
NIGHT SHIFTS PER MONTH

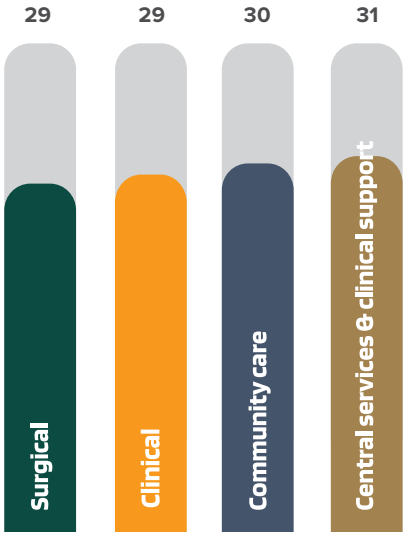
3. DEMOGRAPHICS

GENDER



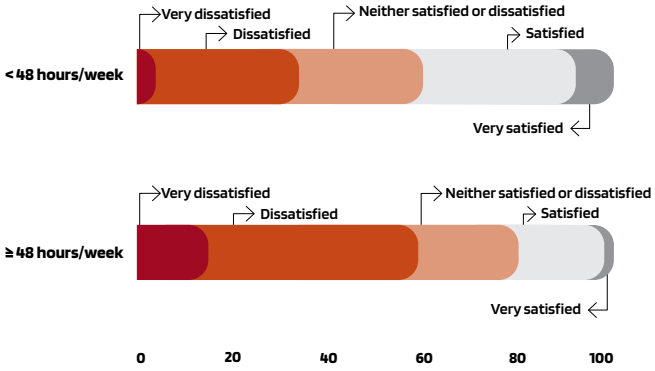
AVG FEMALE • **65%**

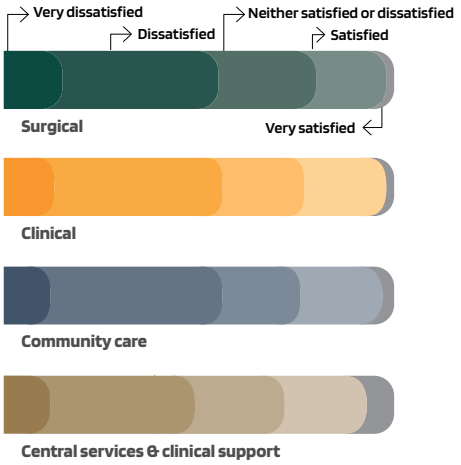
AGE



AVG AGE • **29 YEARS**

4. HOURS & SATISFACTION





- **Spanish junior doctors reported 62 hours/week of average working time, ranking among the highest workloads in the surveyed countries. Nearly all doctors (94%) performed 24-hour shifts and night shifts, with a mean of 5 nights/month. An average of 6 rest days/month was recorded and 6% lacked 4 weeks of annual leave. Satisfaction worsened among those working ≥ 48 hours/week.**

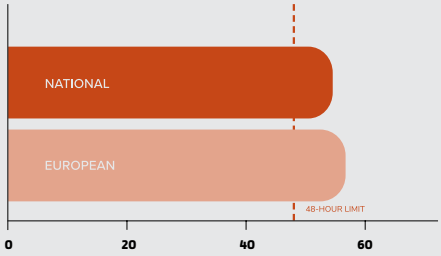
IMMEDIATE PRIORITY

- **Enforce EWTD compliance, reduce shift length and night shifts.**

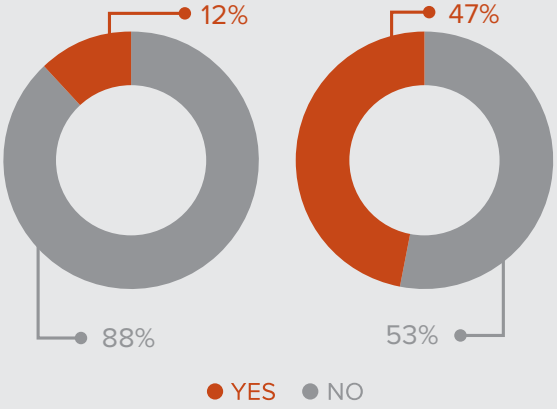
SWITZERLAND

1. WORKING TIME

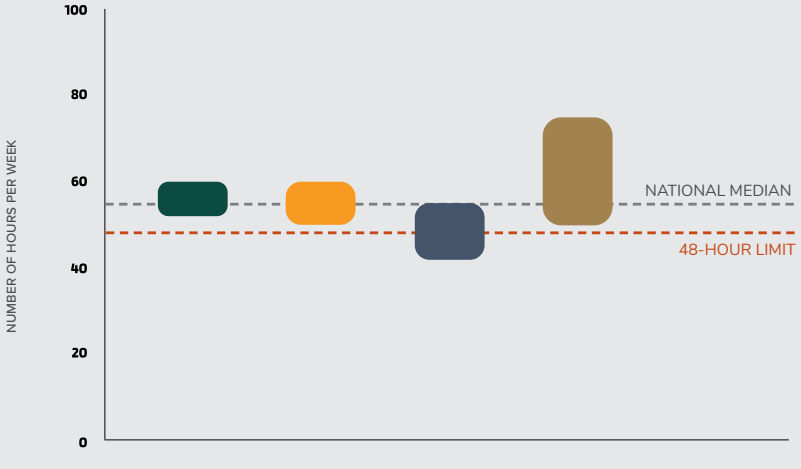
55 HOURS PER WEEK



NUMBER OF HOURS PER WEEK

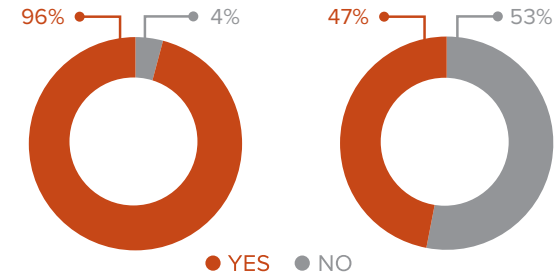


24-HOUR SHIFTS NIGHT SHIFTS



SURGICAL, CLINICAL, COMMUNITY CARE AND CENTRAL SERVICES & CLINICAL SUPPORT

2. RESTING TIME



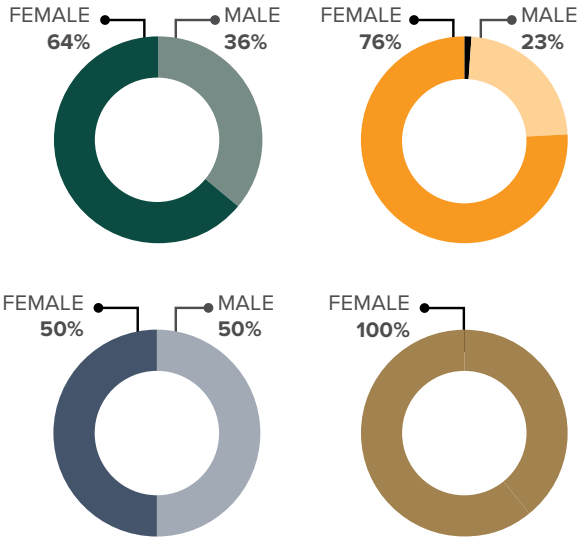
DAY OF REST PER WEEK ANNUAL LEAVE

8 DAYS OF REST PER MONTH

5 NIGHT SHIFTS PER MONTH

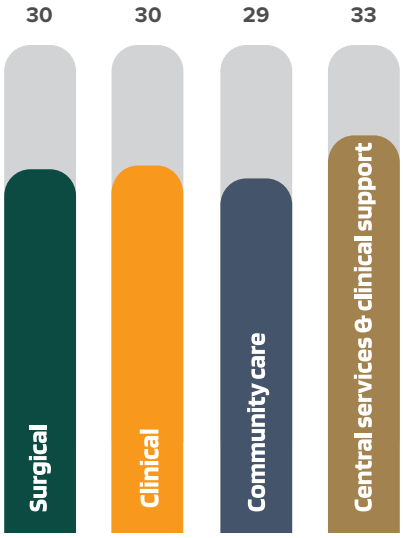
3. DEMOGRAPHICS

GENDER



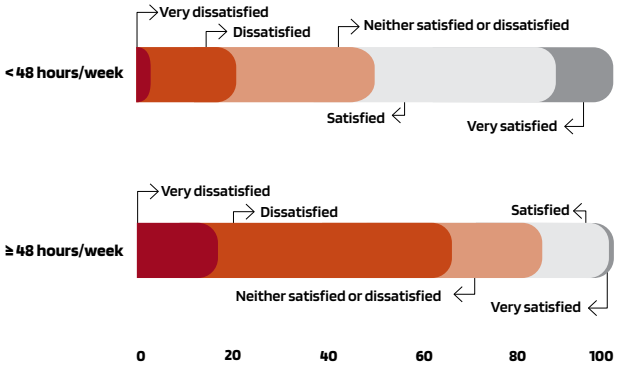
AVG FEMALE • **72%**

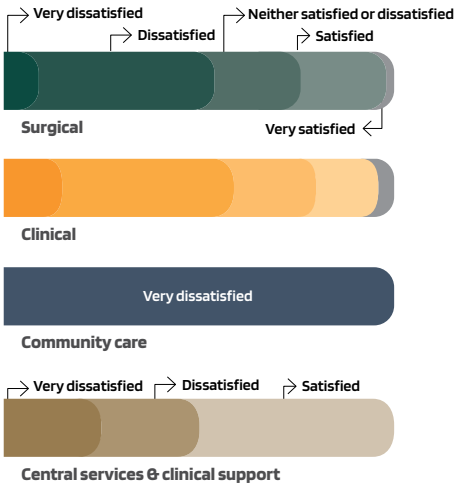
AGE



AVG AGE • **30 YEARS**

4. HOURS & SATISFACTION





- **In Switzerland, junior doctors worked a mean of 55 hours/week, above the EWTD limits. A total of 12% reported 24-hour shifts and 47% worked night shifts, with an average of 5 nights/month. Rest was better with an average of 8 days/month, but 53% did not get 4 weeks of annual leave. Long hours dramatically eroded satisfaction, with a marked increase in the proportion of dissatisfied doctors in the group working ≥ 48 hours/week.**

IMMEDIATE PRIORITY

- **Reduce working hours, introduce a night shift cap and ensure annual leave uptake.**

Annex 1
Survey Questions

Survey on European Working Hours

This survey aims to quantify the working hours of junior doctors in Europe. Your responses are valuable and will be used solely for research purposes. All data collected will remain confidential and stored securely in compliance with ethical standards and data protection regulations. This survey has been approved by the Ethics Committee of the Lisbon Medical Academic Centre.

All the following questions refer ONLY to your job/working hours in postgraduate training. Any working hours at additional jobs should not be considered, except in the last question.

USEFUL DEFINITIONS

- Shift – A work period from the moment you begin work until you finish. It includes any time you are working, at the employer's disposal and carrying out his activity or duties. It is preceded and succeeded by a rest period.
- Rest period – Any period that is not working time.
- Break – A formal pause during a work shift in which you are allowed to rest for a minimum period of 30 minutes.
- Night time – Working shift of at least 7 hours and including the hours between midnight and 5 am.
- Overtime – Hours of work beyond the number set in your contract.
- Annual leave – Consecutive period of time every year when you are not at work.

COUNTRY & SPECIALITY

- Select the country where you are doing your **postgraduate training**.
- Select your **speciality**.
- Select your **year of postgraduate training**.
- Select your age.
- Select your gender

SATISFACTION

1. How satisfied are you with your **work-life balance** over the past year?
2. How satisfied are you with your **work as a resident doctor** in the last year?

WEEKLY WORKING TIME

3. How many hours did you work **last week**?
4. How many hours did you work **last month**?
5. What was the maximum number of consecutive hours that you worked **last month**?

6 • Did you work night time shifts **last month?** (yes/no)

IF YOU ANSWERED YES TO QUESTION 6

— How many night shifts did you work **last month**?

IF YOU ANSWERED YES TO QUESTION 6

— How many of those night shifts had **more than 8 hours** duration?

OVERTIME

7 • According to your contract, how many hours per week should you work?

8 • Did you work overtime beyond the hours in you contract **in the last 12 months?** (yes/no)

IF YOU ANSWERED YES TO QUESTION 8

— Was any of that overtime work **not** paid? (yes/no)

REST BREAKS DURING WORKING HOURS

9 • How many shifts of **≥6 hours** did you have **last week?**

10 • How many breaks during those shifts did you have **last week**?

DAILY REST

11 • How many **24-hour** shifts did you have **last month?**

12 • How many shifts with **≥13 hours** did you have **last month?**

IF YOU ANSWERED 1 OR MORE TO QUESTION 12

— How many shifts with **≥13 hours** did you have **last week**?

IF YOU ANSWERED 1 OR MORE TO QUESTION 12

— How many of those shifts were followed by an **11-hour rest before the next shift**?

WEEKLY REST

13 • Did you have a full day of rest (24 consecutive hours) per week in the **last month**?

14 • How many full days of rest (24 consecutive hours) did you have **last month**?

YEARLY REST

15 • Did you take **at least 4 weeks** of annual leave (vacation) in the **last year**? (yes/no)

16 • How many days of annual leave (vacation) did you take **last year**?

17 • How many of those days were paid?

OTHERS

18 • Which month did you use as a **reference** to answer the questions above?

19 • Did the number of hours from the answers above correspond to a typical week/month of work?

IF YOU ANSWERED NO TO QUESTION 19

— Were these answers from a week/month with less or more working hours?

20 • Besides the hours from your postgraduate training job, do you work **other jobs/for other employers**? (yes/no)

IF YOU ANSWERED YES TO QUESTION 20

— How many hours did you work at **other jobs last month**?

Annex 2
Specialities

European specialities categorization

Speciality List

Speciality Groups			
Surgical Specialities	**Clinical Specialities**	**Community Care**	**Central Services / Clinical Support**
Anaesthesiology	Allergology	General practice / Family medicine	Laboratory medicine / Medical biopathology
Angiology / Vascular medicine	Cardiology	Public health medicine	Medical genetics
Cardiothoracic surgery	Child and adolescent psychiatry		Medical microbiology
General surgery	Clinical neurophysiology		Neuroradiology
Gynaecology & Obstetrics	Dermatology and Venereology		Nuclear medicine
Neurosurgery	Emergency medicine		Occupational medicine
Oro-maxillo-facial surgery	Endocrinology		Pathology
Orthopaedics & Traumatology	Gastroenterology & hepatology		Physical and rehabilitation medicine
Otorhinolaryngology	Geriatrics		Radiation oncology & radiotherapy
Paediatric surgery	Infectious diseases		Radiology
Plastic, reconstructive & aesthetic surgery	Internal medicine		
Thoracic surgery	Medical oncology		
Urology	Nephrology		
Vascular surgery	Neurology		
	Ophthalmology		
	Paediatrics		
	Psychiatry		
	Rheumatology		

REST-JD REPORT

RESEARCH ON EUROPEAN JUNIOR DOCTOR'S SATISFACTION AND WORKING TIME

STUDY OF WORKING HOURS AND RESTING TIMES OF JUNIOR DOCTORS IN EUROPE