

# Impact and management of comorbidities in people with obesity: a multinational survey

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## OBJECTIVE

- To describe the presence of comorbidities in people/patients with obesity (PwO), and associated concomitant treatments, weight management and hospitalisation in PwO with  $\geq 1$  comorbidities (PwOC)

## CONCLUSION

- Results indicate high presence of obesity-related comorbidities in PwO. Presence of comorbidities was a common physician-reported reason for initiation of weight management and treatment-related discussions
- Preventing the occurrence of, or controlling comorbidities in, PwOC could help reduce overall impact on PwO outcomes, highlighting the need for effective weight management and earlier intervention

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## BACKGROUND

- Obesity is a chronic progressive disease that implicates several organ systems<sup>1</sup> and is associated with various comorbidities, such as type 2 diabetes mellitus (T2DM) and cardiovascular conditions.<sup>2</sup> Obesity is also linked with mental health issues, such as anxiety and depression<sup>1</sup>
- There is a need to better understand the role of comorbidities in PwO and obesity management in real-world settings

## STUDY DESIGN

- Data were drawn from the Adelphi Real World Obesity Disease Specific Programme (DSP)<sup>TM</sup>, a real-world, cross-sectional survey of physicians and the PwO they manage, conducted in Brazil, Canada, China, Japan, Kingdom of Saudi Arabia (KSA) and United Arab Emirates (UAE) between April and December 2022
  - The DSP methodology has been published and validated previously<sup>3-5</sup>
- Physicians responsible for managing PwO were recruited with specialties varying by country:
  - Brazil:** primary care physicians (PCP), diabetologist/endocrinologists and cardiologists; **Canada:** PCPs and diabetologist/endocrinologists; **China:** Internists and diabetologist/endocrinologists; **Japan:** Internists, diabetologist/endocrinologists and cardiologists, and **KSA/UAE:** PCPs, diabetologist/endocrinologists and obstetricians/gynaecologists
  - Physicians completed an attitudinal survey reporting reasons for initiating a discussion with PwO about their weight. Physicians also reported demographics, comorbidities, clinical characteristics and management for up to eight of their consecutive PwO meeting the inclusion criteria
  - PwO inclusion criteria: at time of data collection must be aged  $\geq 18$  years old, not involved in a clinical trial, on a weight management programme and/or have a BMI of  $\geq 30$  in Brazil, Canada, KSA and UAE,  $\geq 28$  in China and  $\geq 25$  Japan and recruited via one of two groups:
    - No anti-obesity medication (AOM) PwO:** not on an AOM at time of data collection
    - AOM PwO:** on an AOM at time of data collection
  - Analysis criteria: qualifying PwO that had  $\geq 1$  comorbidities at time of data collection (PwOC)
  - All respondents provided informed consent and ethics exemption was obtained from Pearl IRB. All analyses were descriptive

## RESULTS

- A total of 431 physicians provided data on 2839 PwO (Table 1). Overall, mean  $\pm$  standard deviation (SD) number of comorbidities was  $2.1 \pm 2.0$
- Among these PwO, 83% (n=2351) had  $\geq 1$  comorbidity (PwOC).

**Table 1: Sample size and AOM status among PwO\***

|        | n    | AOM, n (%) |
|--------|------|------------|
| Total  | 2839 | 1121 (39)  |
| Brazil | 895  | 480 (54)   |
| Canada | 199  | 156 (78)   |
| China  | 801  | -          |
| Japan  | 543  | 285 (52)   |
| KSA    | 200  | 100 (50)   |
| UAE    | 201  | 100 (50)   |

\*Target quotas by country were established to ensure enough number of PwO in each group

**Table 2: Demographics and clinical characteristics among PwOC**

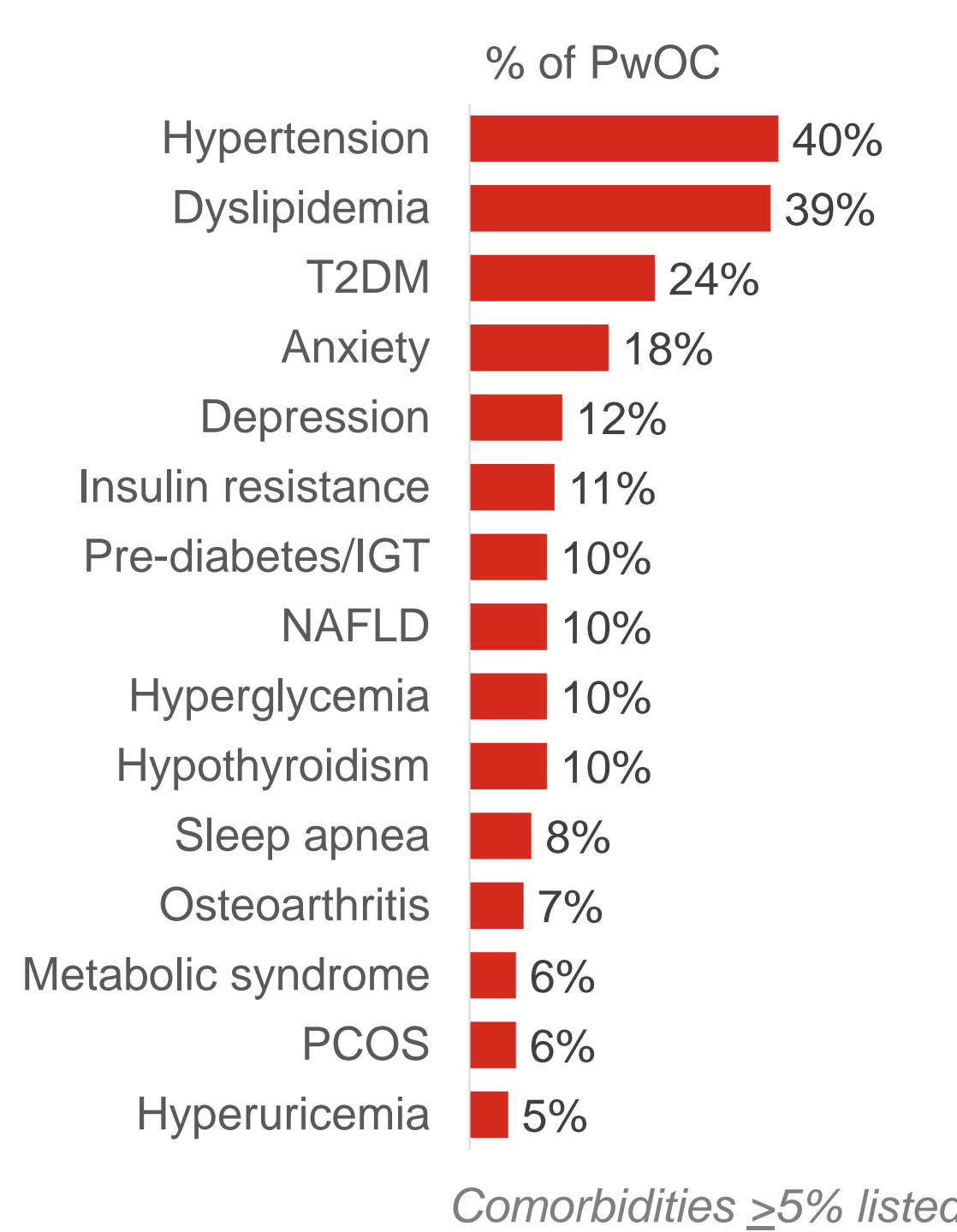
| Mean $\pm$ SD or n (%)  | Total (n=2351)  |
|---|-----------------|
| Age (years)   | 44.3 $\pm$ 13.5 |
| Female*   | 1283 (55)       |
| BMI (kg/m <sup>2</sup> ) at diagnosis   | 35.2 $\pm$ 7.9  |
| BMI (kg/m <sup>2</sup> ) at time of data collection                                 | 33.2 $\pm$ 7.2  |
| Employed (part-/full-time)  | 1694 (72)       |
| Receiving AOM at time of data collection  | 950 (40)        |
| Concomitant medications   | 2.3 $\pm$ 2.0   |
| Top three concomitant medications   |                 |
| Statin  | 837 (36)        |
| Metformin   | 624 (27)        |
| Angiotensin-II receptor inhibitor   | 596 (25)        |
| Hospitalised in the last 12 months in relation to obesity                           | 72 (3)          |
| Hospitalised in the last 12 months in relation to any obesity-related comorbidities | 113 (5)         |

\*Three intersex PwO in Brazil

## LIMITATIONS

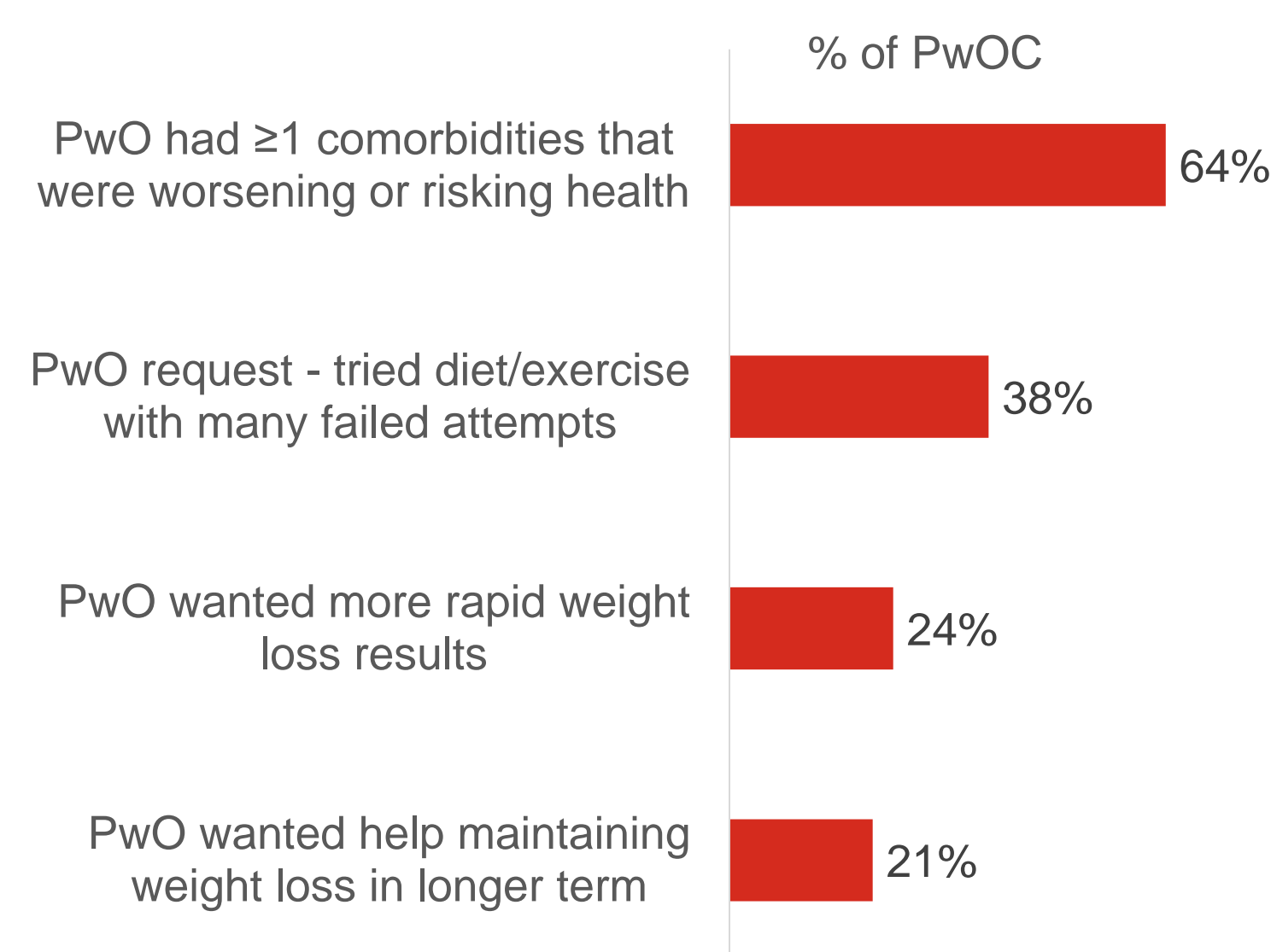
- Physician participation could have been influenced by willingness to complete the survey
- Recall bias, a common limitation of surveys, may have affected responses to the questionnaires. However, physicians had access to patient records during the survey, minimising recall bias
- The cross-sectional design of this study prevents any conclusions about causal relationships, however identification of significant associations is possible
- No p values were calculated. Any differences noted in reported results are based on summaries of descriptive data, rather than reflecting formal hypothesis testing

**Figure 1: Most prevalent comorbidities among PwOC were hypertension, dyslipidemia and T2DM**



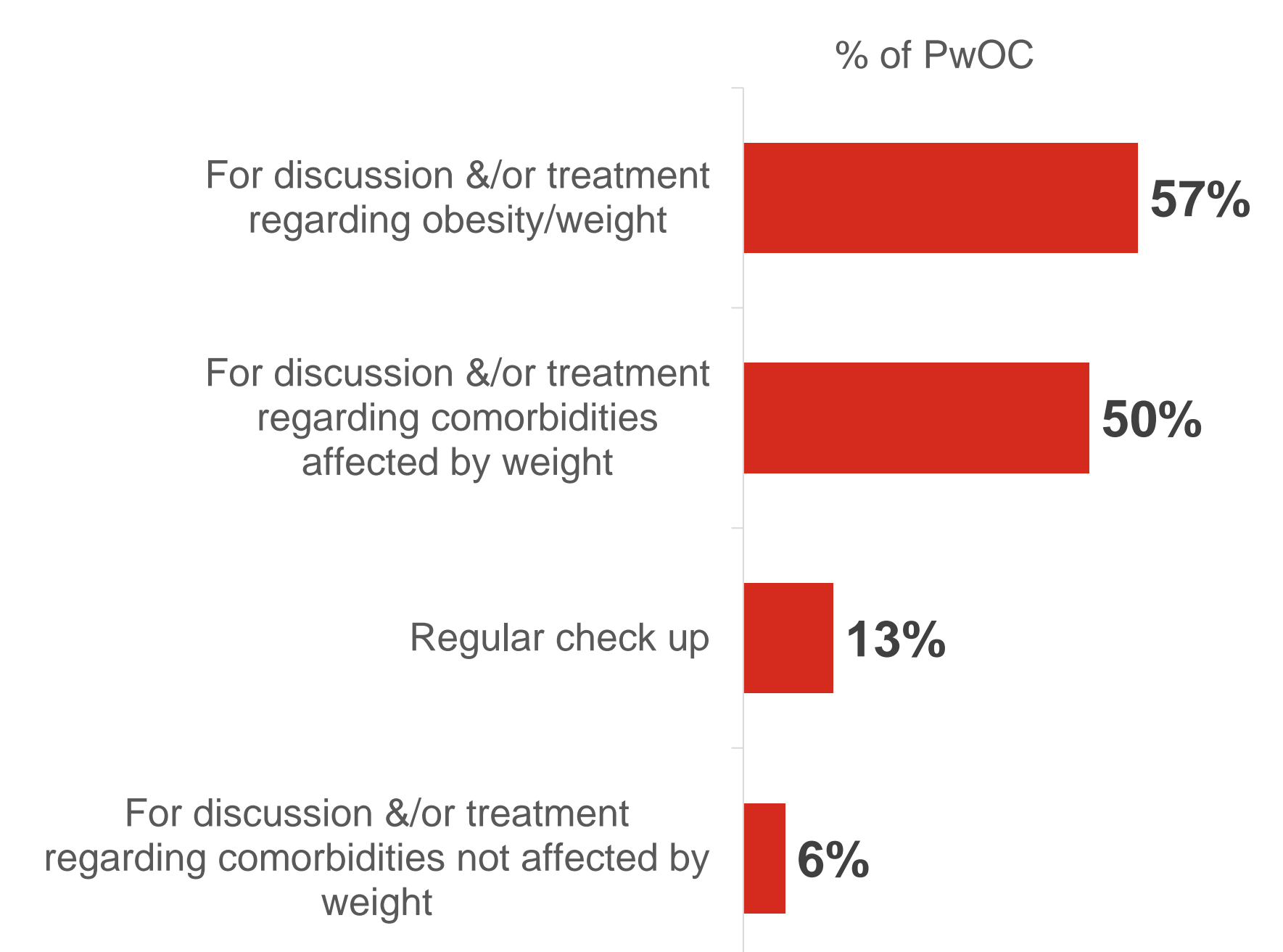
- PwOC had a mean  $\pm$  SD of  $2.5 \pm 1.7$  comorbidities, with 40% having three or more comorbidities
- Cardiovascular conditions were most prevalent, followed by T2DM and psychological conditions

**Figure 3: Most common reason why PwOC started their current weight loss attempt was due to the presence of comorbidities that were worsening or risking their health**



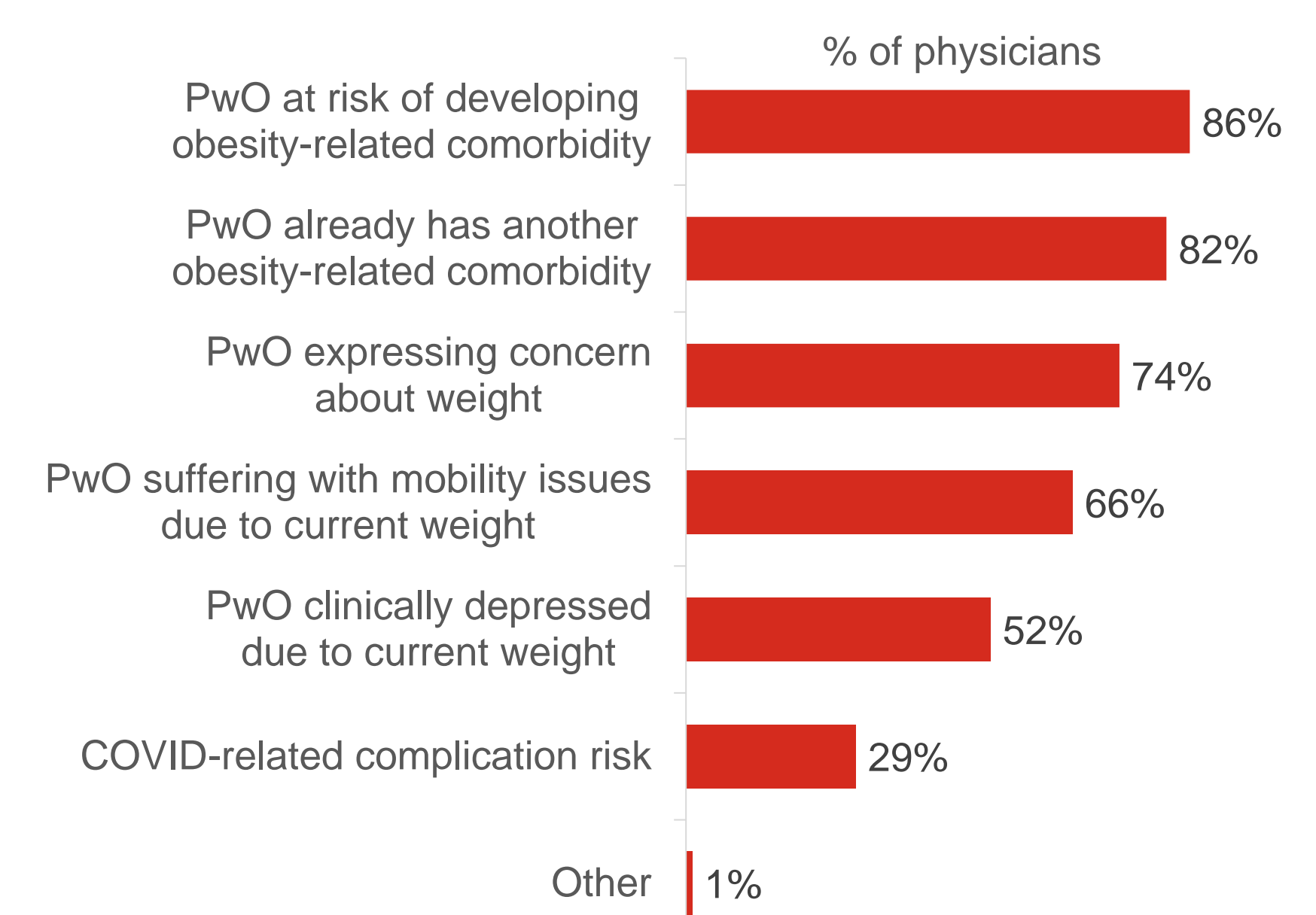
- The most common current comorbidities physicians were trying to manage in PwOC were hypertension (47%) and dyslipidemia (39%)

**Figure 2: Most PwOC first consulted their physician for discussion/treatment regarding their obesity/weight or for weight-related comorbidities**



- Among PwOC who consulted for discussion &/or treatment regarding comorbidities affected by weight, the most common comorbidities that triggered these discussions were hypertension (47%), T2DM (41%) and high LDL levels (27%)

**Figure 4: Most common reasons why physicians initiated a weight discussion with PwO were the risk of or presence of obesity-related comorbidities**



- Other important reasons were PwO own concerns about their weight

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## DISCLOSURES:

VH, AL and TM are employees of Adelphi Real World. SK, JR, AT and EA are employees and shareholders of Eli Lilly and Company. The DSP is a wholly owned Adelphi product. Eli Lilly and Company was one of multiple subscribers to the DSP

## ABBREVIATIONS:

**AOM**, Anti-obesity medication; **BMI**, Body mass index; **DSP**, Disease specific programme; **IGT**, impaired glucose tolerance; **KSA**, Kingdom of Saudi Arabia; **LDL**, Low density lipoprotein; **NAFLD**, Non-alcoholic fatty liver disease; **NASH**, Non-alcoholic steatohepatitis; **PCOS**, Polycystic ovary syndrome; **PCP**, Primary care physician; **PwO**, People with obesity; **PwOC**, People with obesity with  $\geq 1$  comorbidity; **SD**, Standard deviation; **T2DM**, Type 2 diabetes mellitus; **UAE**, United Arab Emirates