Calculation Skills: Evaluating the impact of non-medical prescribing (NMP)

The recent Cochrane Database systematic review by Weeks, Maclure and Stewart (2016) identified that non-medical prescribers were as effective as medical prescribers in achieving medication adherence, patient satisfaction and positive outcomes across a range of conditions. The current picture of NMP is identified in the 2015 report commissioned by Health Education North West (HENW): Non-Medical Prescribing (NMP): An Economic Evaluation. The HENW (2015) report identified the growth in the number of non-medical prescribers, as well as identifying a range of positive impacts of NMP on health care services.

Question 1
The HENW (2015) report identified that 58,497 nurses had been awarded a prescribing qualification through an English university. A further 11,486 were awarded a qualification elsewhere in the UK.

(i) What was the total number of nurses awarded a prescribing qualification by UK universities by 2015?

(ii) If 45% of those trained outside of England undertook prescribing programmes in Scotland, how many of the total nurses (rounded up or down to the nearest whole number) would have been awarded a prescribing qualification by a Scottish University?

Question 2
The number of pharmacist prescribers in England reported in the HENW (2015), according to figures provided by the General Pharmaceutical Council, was 3,845. Figures quoted from the NMC of nurses registered and holding a prescribing qualification was 53,572.

(i) With a total of 58,000 NMPs in England with a current prescribing qualification at the time of the report, what percentage (rounded up or down to nearest whole number) were pharmacists?

(ii) How many NMPs in England were not nurses or pharmacists?

Question 3
The HENW (2015) report identified that in 2014, NMPs reported that 33% of their consultations prevented a GP appointment. The average GP consultation was identified as 12 minutes in length. If the NMP saw 64 patients in a week, how much time would be saved on GP appointment time? Round up or down to the nearest whole number when calculating 33% of patients.

Question 4
It was also reported by NMPs that some of their consultations prevented a hospital admission. Luke, a pharmacist independent prescriber, saw 240 patients, of which 12 were prevented from requiring a hospital admission. If Luke was representative of the whole NMP population, what percentage of NMP consultations were reported by HENW (2015) as preventing a hospital admission?

Question 5
NHS Choices (2017) state a current annual NHS budget of 101.3 billion in England. HENW (2015) suggested that NMP has the potential to save 777 million annually in England. Assuming the same costings, what would be the annual NHS budget for England if 50% of the potential annual saving was achieved? Round your answer up or down to the nearest 100 million.
Answers

Question 1
(i) \(58497 + 11486 = 69,983\)

(ii) 100% of UK nurses awarded prescribing qualification outside England = 11,486
1% = \(11486 \div 100 = 114.86\)
45% = \(114.86 \times 45 = 5169\) (rounded up)

Question 2
(i) 100% = 58,000
1% = 580
3845 ÷ 580 = 7% (rounded up)

(ii) 58,000 - 3,845 - 53,572 = 583

Question 3
33% of 64 = 21 (rounded down)
21 \times 12 = 252

Question 4
100% = 240 patients
1% = 2.4
12 ÷ 2.4 = 5%

Question 5
50% of 777 million = 388.5 million
101,300,000,000 – 388,500,000 = 100,911,500,000
100.9 billion (rounded down)

References

