Twitter Thread by Global Diabetes Journal Club #GDJC

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@GDiabetesJC

1/Part 2 on #diabetes #prevention based on the @TheLancet diabetes commission report.

Individual level prevention of type 2 diabetes (T2D) gets a lot of attention. Part 2 reflect this - but don't worry, there will be more on the other levels in part 3..

Let's get going..

2/Several large randomized controlled trials (RCT) have shown that lifestyle interventions (diet, exercise, metformin) can prevent/delay onset of T2D as well as prevent later complications like cardiovascular disease and eye disease.

3/This has led to the implementation of diabetes prevention programmes for people at high risk of T2D in some high-income countries (HIC) like Germany, Finland, USA, UK, Poland and Singapore.

4/Evaluation of such real-world interventions is important as they may not provide similar benefits as in the RCTs that included volunteers that were very closely supervised. Evaluation of the US DPP has observed favorable weight loss at 1 year. Similar efforts are underway in UK

5/Although the individual level interventions overall work when there is adherence, it is often only a small proportion of the population that can adhere over time. Hence...

6/Understanding barriers like economic constraints, insufficient resources, cultural taboos and inadequate knowledge and skills is essential and needs more research

7/Those with the highest risk of T2D are also likely to be those who benefit the most from individual level prevention efforts. Identifying these high-risk individuals is thus important. There are many diabetes risk scores in the literature

8/It's important to know that their performance (diabetes risk scores) to some degree is context dependent - some may be more relevant in high- than low-income countries. Understanding who will benefit the most from lifestyle interventions requires further research, though.

9/The cost-effectiveness of diabetes prevention programmes has been shown in HIC. Group-based interventions in high-risk individuals particularly lower the cost.

10/Another opportunity to lower the cost and make individual level diabetes prevention more easily available is through mobile health programmes (e.g. mHealth, eHeath, telemedicine)

11/The use of tech, such as smartphones, has become more wide-spread in low- and middle-income countries. This offers great opportunities.

12/One good example was from an intervention in India where participants received health behavior messages on their mobile phones via text. https://t.co/xQd9z4o6sL

13/The relative risk reduction was 36% after 2 years compared with the control group. However, there is a lack of evidence from RCTs with long-term outcomes on this topic.

14/And even though technology offers advantages, it often work best when supported by health-care workers. The degree of behavioral support seems to be a key component in the success of the intervention.
https://t.co/yGEYwJZrSj

15/And what about screening of diabetes? Well, evidence from the ADDITION-Europe trial has shown that screening following by management reduced the risk of cardiovascular disease by 4.9% (absolute) at 6 years

16/An economic analysis from Denmark also indicated lower health care costs in the screened intervention group.

17/However, screening should only be put into place within a health care system that has the capacity to manage the detected cases. When screening is implemented a lot more cases are likely to be detected.

18/A good example is from Brazil. In a nationwide screening programme, 10% of those screened (346,168 of 22,069,905) were confirmed with detected type 2 diabetes.

19/A lot on individual level prevention here. However, there is also evidence that highlights the importance on population health in prevention:

■■■Mother and child health
■Basic education
■Design of environment
■■Health policies

20/But can we design large RCTs to evaluate interventions of these? For some, maybe, but not for all.. What to do then? More on this in part 3…