

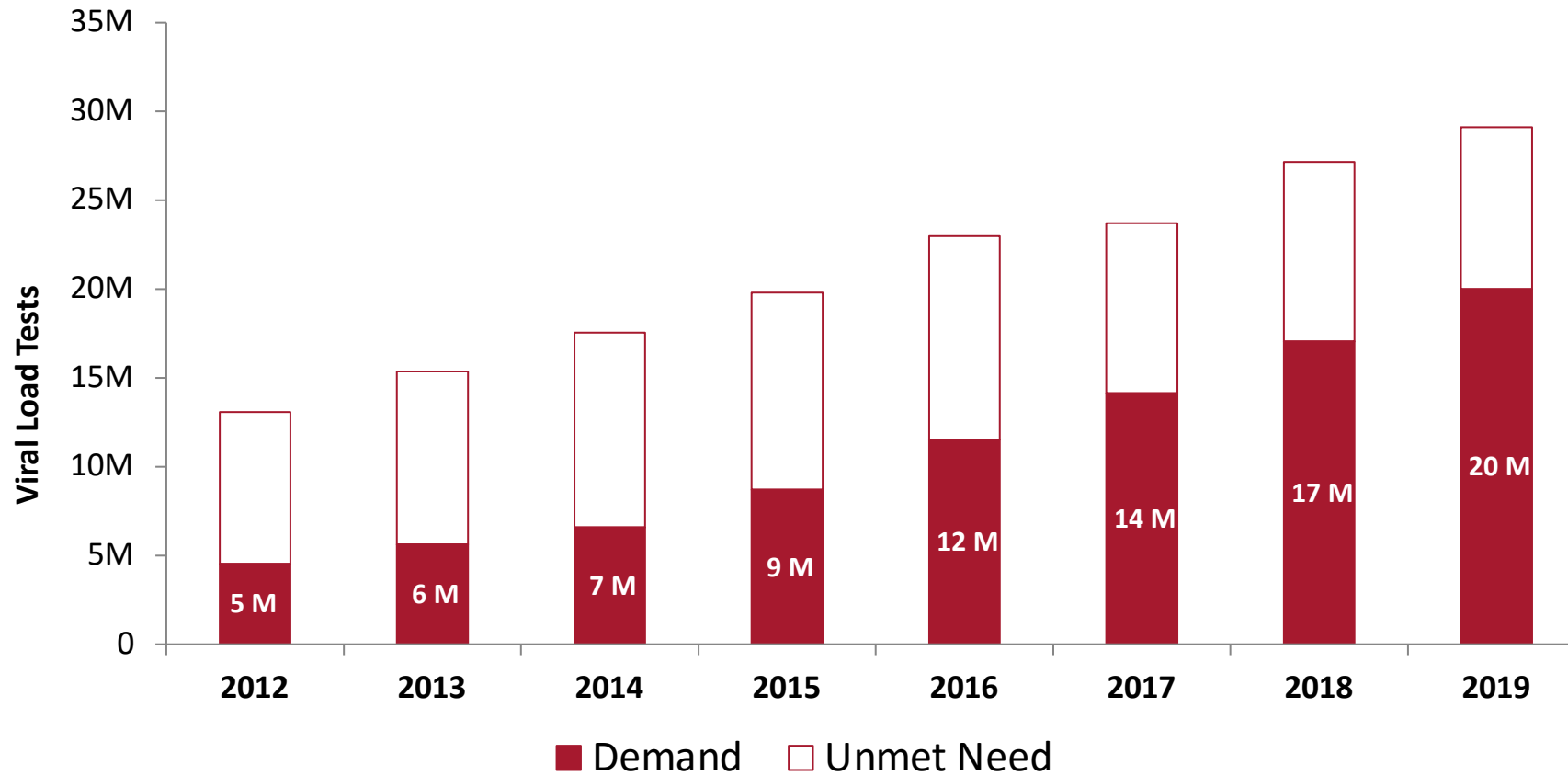
# Investments in diagnostic networks

13 August 2020

Smiljka de Lussigny



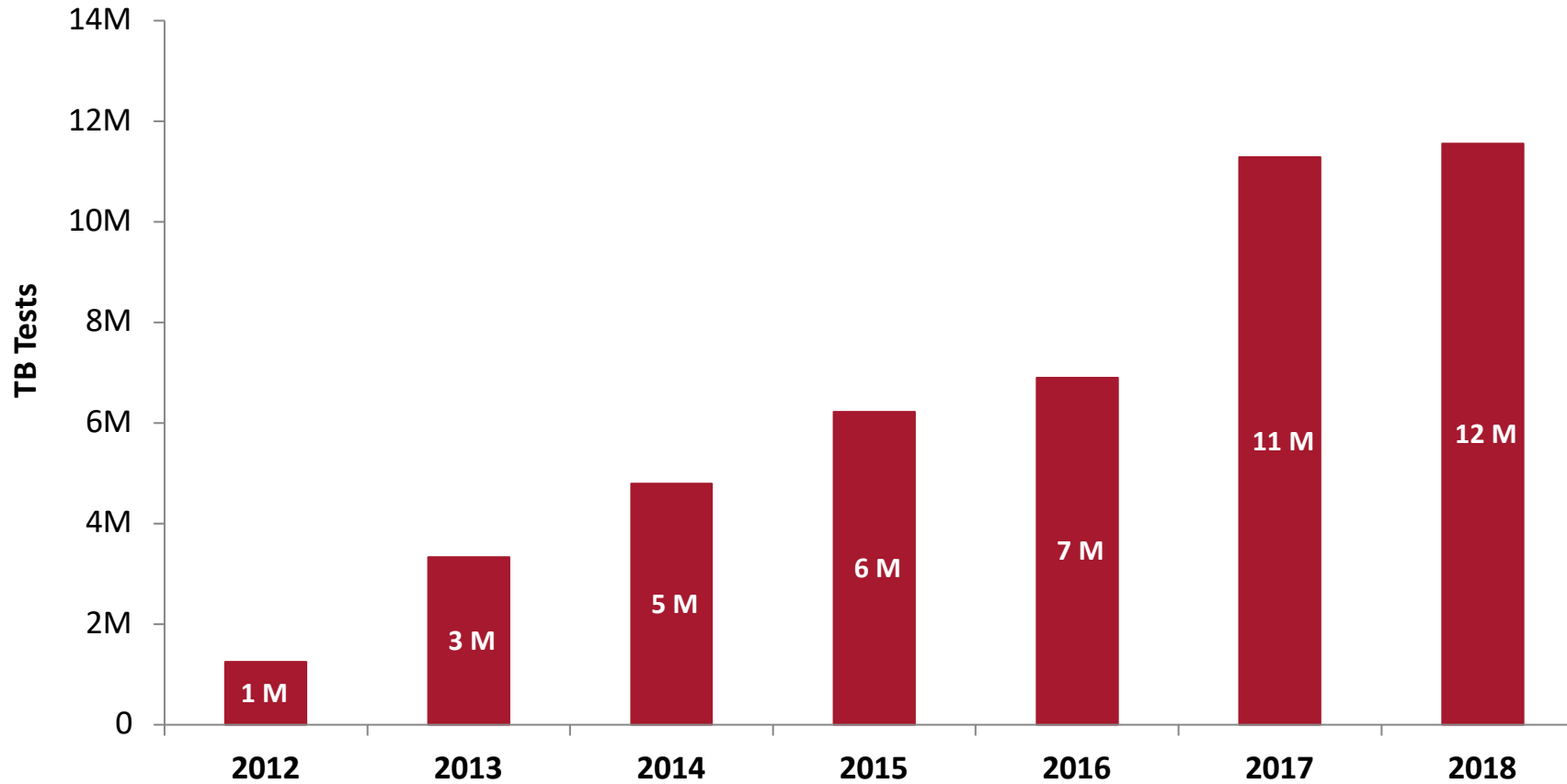
# Global HIV viral load demand



*The annual growth rate of global demand for VL testing over the past 7 years is ~24%, and unmet need as a % of total need has fallen from ~65% (in 2012) to ~31% (in 2019)*

Source: Data from 21 high-burden countries, supplemented by linear extrapolations of "Rest of World" by Avenir Health.  
Note: Need is estimated using ART patient numbers and country-level testing guidelines. Where national guidelines are unknown, the WHO's recommendations of 2 tests for new patients and 1 annual test for existing patients are used.

# Global Cepheid TB testing volumes



*The annual growth rate of TB tests on Cepheid over the past 6 years is ~45%*

Source: Data obtained from Cepheid on historical testing volumes

# Investments in diagnostics

- Disease priorities – increasing needs for molecular testing (HIV, TB, hepatitis, HPV, Ebola, SARS-CoV-2...)
- Technology evolution – point of care, multiplexing solutions
- Funding considerations, including past investments
- Moving from parallel programmes to a system approach
- Integrated Diagnostics Consortium – a platform of partners and procurers in the molecular diagnostics space across diseases

# Diagnostic network optimization - DNO

The diagnostic network optimization is an approach that aims to redesign the **diagnostic network set-up** in order to **increase access, maximize impact, and generate efficiencies**.

It aligns testing demand and capacity in the most cost-effective way by **defining the optimal instruments mix, identifying the most appropriate locations** where instruments should be placed, and/or **designing the referral network linkages** across that revised network. U

# DNO could aim to...

- **Increase access to testing, and generate greater public health impact**, as improved device placement and integrated specimen referral network aim to bring capacity where it is lacking, and shorten turnaround time (TAT)
- **Increase operational efficiencies**, through the implementation of integrated supporting systems, such as sample transportation, results delivery and data management
- **Decrease total cost per test**, as the increase in instrument utilization reduces the contribution of fixed costs over the total cost per test

---

- **Create greater visibility leading to more effective allocation of funding**, increasing the value of money spent by the range of donors supporting diagnostics services in country
- **Enhance MOH decision-making capacity and coordination through greater understanding of network**
- **Create a more competitive and dynamic marketplace**, as data visibility and increased competition increase bargaining leverage with suppliers

Direct  
impact

Indirect  
impact

# DNO principles

Be led by MoH and aligned with country health strategies and priorities

**All the relevant disease control programs within the Ministry of Health are** actively engaged throughout the DNO process, and supported by partners to drive optimization, to **make final decision on optimal new network and lead implementation**

Be patient-centric and achieve improved Public Health impact

**DNO must be centred around patients, and lead to greater public health impact.** It should help MoH more efficiently and effectively deliver its diagnostics services, so more health is achieved for every \$ spent

Aim to be comprehensive

**National is better than regional, and including multiple disease assays - based on MoH's priorities - is preferable,** so DNO becomes an integrated national exercise that leads to impact and cost improvements across disease areas

Be Implementable and Lead to a Sustainable Network

**The optimal scenario that is designed through this exercise should be implementable and sustainable,** under funding available. Systems should be in place to enable continuous improvement through iterative network optimization exercises

Build accountability

**Clear targets must be set, and a robust M&E process established to** ensure DNO leads to positive change once implemented, informing continuous improvements

Not penalize any disease area

**Every effort should be made to ensure that no disease program should be penalized as a result of a DNO exercise, in terms of access, impact and/or cost,** and all disease programs should benefit overall

Be collaborative and transparent

**All key stakeholders act together,** in a close and coordinated partnership, sharing resources and expertise, and communicating with transparency

The background features a complex, abstract composition of overlapping shapes in various shades of red, from deep maroon to light pink, and small accents of teal. The shapes are layered, creating a sense of depth and movement. The overall aesthetic is modern and graphic.

Thank you