

projected from the current trend, ignoring the ceiling and using Microsoft Excel software.

It is recognized that the global RDT market ceiling may shift due to changes in health service capacity, fluctuations in fever cases and unpredictable nongovernmental and private sector procurement. Further, it is unclear whether or not nongovernmental procurement figures are included in national reporting to our referenced data sources. These uncertainties will correspondingly impact the ceiling of maximum capacity for use.

ESTIMATES

RDT procurement and production

RDT procurement reported by the available sources was 12 million units in 2005. Since 2000, RDT procurement is observed to have increased rapidly, at nearly a doubling rate from 2000 to 2004. Moreover, since 2000, an increasing number of countries are adopting the use of RDT and have budgeted RDT as part of anti-malaria activities (Table 1).

Global RDT production, extrapolated from known HRP2 production, is estimated to be 28 250 000 in 2005. Except for the period between 2002–2003, RDT production has increased at nearly a doubling rate since 2000 (Table 1). There is therefore a gap between reported use and estimated production of 16 million RDT (57% of estimated production).

Ideally, production and procurement numbers should agree, given that RDT are generally only produced when procurement orders are received. However, consistent with a lack of private sector data and incomplete data reporting by, and collection from, procuring bodies, a large discrepancy exists between data on RDT procurement and production

data (Table 1). As such, the forecast analysis in this paper relies predominately on estimated production data.

RDT procurement forecast

According to our forecast, RDT procurement will increase steadily over the next decade (Figure 1). This prediction is supported by several observable trends. First, an increasing number of countries are adopting RDT, which will consequently increase gross RDT procurement. Moreover, the vast majority of malaria proposals from The Global Fund to Fight AIDS, Tuberculosis and Malaria are increasing budgets for RDT use, often introducing RDT into countries that have previously not used them. In the next ten years, the estimates predict over 460 million RDT will be procured, and in the next three years, over 100 million RDT will be procured.

Following the simple trend-line, full market saturation (to the current public sector ceiling) would be achieved within a few years. If it is assumed the ceiling (67 million) remains constant, but that the annual rate of expansion of RDT use reduces in proportion to the remaining available capacity to absorb them, annual RDT procurement would reach 45 million by 2010 and grow to almost 60 million by 2015. Using 2005 production and rate of increase as a baseline, RDT procurement will increase 52% by 2010 and 96% by 2015. By contrast, the simple trend-line projection with no ceiling, predicts a 67% and 150% increase in the same respective years.

DISCUSSION AND INTERPRETATION

There is clearly a large element of uncertainty in the future volume of RDT use, and this depends heavily on the existence and level of the procurement ceiling in the public health sector (Figure 1). The reducing effect of the RDT market ceiling on the procurement forecast can be reasoned by several factors. The need to recruit and train health workers, improve access to remote areas, and strengthen quality control will delay increased procurement of RDT. Further, for countries newly adopting RDT, pilot studies used to assess feasibility and efficacy are inevitably time consuming and will most likely abate increased procurement of RDT. While it is probable that procurement growth will be limited in this manner, uncertainties that variably affect

TABLE 1: Country Procurement and Manufacturer Production Data (source: Global Fund, antibody supplier data)

	2000	2001	2002	2003	2004	2005
Global RDT procurement	16 700	98 500	1 110 133	5 068 269	9 330 000	11 588 848
Global RDT production	2 875 000	4 500 000	7 625 000	8 875 000	18 500 000	28 250 000
number of countries using RDTs	1	1	6	18	21	32

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