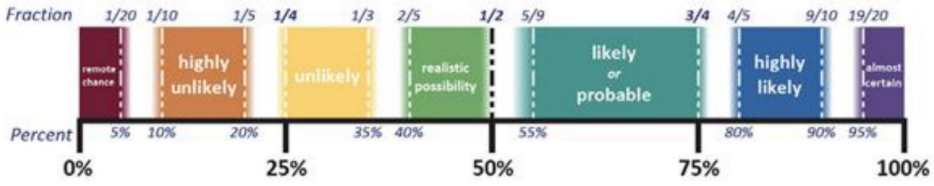
3. What are the key questions to be considered at SAGE?

- Do SAGE support the conclusions presented about the characteristics of vulnerability of care homes, based on moderate data of probable effects.
- Do SAGE agree that there is strong confidence that there has been a decline in all-cause mortality in care homes in England, but less confidence in whether recent trends are still declining or plateauing
- Do SAGE support recommendations on testing, including the prioritisation of high-risk homes that do not currently report outbreaks, and the inclusion of all staff and residents in testing, based upon weak evidence of probable effects.
- Do SAGE support the need for further data collection and analyses, including on contact patterns, and the more routine compilation of data across streams and geographies to consider mode of introduction of disease and cross-transmissions within settings and including all present in care homes.
- Do SAGE support the recommendations on future research priorities, including a serio-prevalence survey, environmental survey, and epidemiological modelling.

4. Are there any proposed next steps?

- Expand analyses to consider risks in domiciliary care
- Working group continue under the auspices of DHSC, to support analyses that can inform ongoing programming.

PHIA probability yardstick – to be used when expressing likelihood or confidence



that the routine testing of patients leaving hospital will help address this, although there may be a continued risk of infection from of false negatives returning to homes.

- The Second Generation Surveillance System (SGSS) data on positive and negative swab results shows that within care home transmission is highly likely, though many of these outbreaks are censored so final outbreak size hard to quantify. Initial limits to testing access is likely to mean that the number of positive tests is a major underestimate of cases to date. Evidence suggests that in some instances, outbreaks slowly percolate across homes. In other cases outbreaks are more explosive.

DATA GAPS:

- Further modelling could help quantify secondary attack rates and estimate final attack rates. (Annex 1 & 2). The reproduction number in homes is a function of number of contacts and probability of transmission given contact. As contact rates are highly variable and dependent on care needs/role of staff in care home, we would expect the reproduction rate to also be heterogeneous.

- Better linkage between hospital discharge notes and care home readmission would help to assess more accurately the connectedness/transmission from hospital and care home setting and visa verse. The WG will explore options moving forward.

Response to Q2: **What are current and projected trends in transmission in Care Homes? Do recent declines in cases suggest that the situation is under control?**

We can say with strong confidence that:

- the number of all cause deaths reported to CQC has dropped from a peak in mid-April. These declines have been seen in both nursing and care homes (see Figure 2). All cause deaths in domiciliary care reported to CQC have plateaued over this period (though only about 10% of all care home deaths).

- There is no evidence of confirmed COVID19 deaths decreasing. All COVID flagged deaths dropped in late April, but this is driven by a drop in suspected cases. Furthermore, the drop in COVID19 flagged deaths in recent days may be a surveillance effect.

- The number of new outbreaks reported to PHE has dropped from around 150 per day to 100 per day in England, with some regional differences.

- The SGSS data shows that outbreaks are likely to be ongoing, with gaps in the time between the positive swabbing results being due to ongoing transmission, false negative results, or the new introduction of disease to care home (Figure 5).

- The decline in outbreaks reported and newly notified deaths is a positive sign. However, given asymptomatic infection and relatively recent increases in testing capacity, numbers are highly variable. We can say with moderate confidence that it is highly probable that we will see both new and ongoing outbreaks moving forward.

Response to Q3: **What approach to swabbing and testing is likely to be most effective in reducing rates of infection? Is there evidence to support:**

- ***Testing all residents, irrespective of whether symptomatic or not?***
- ***Testing all staff working in homes (e.g., care workers, cooks, receptionists)?***

- ***How to prioritise testing – including between homes, those who do and do not report infection, and the frequency of testing of residents / care home staff?***
- ***Is there evidence to support the value of weekly testing?***

The large scale implementation of testing in care homes is central to preventing and managing outbreaks. Testing can only support reduction of infection rates if coupled with actions to reduce contacts with positive cases and infection control more generally. The current testing strategy focuses initially on homes that have reported or suspected cases, with largest homes being prioritised.

We can say with medium confidence that:

- Given the importance of trying to stop the spread of infection into homes, and the risk of asymptomatic infection and transmission, testing should include homes that do not report cases, as well as those with suspected or confirmed cases. If no testing has been done, the priority should be given to larger care homes that are at higher indicators of risk, as detailed above. Follow-up action should then prioritise preventing infection being imported into these homes. This approach has been adopted in some settings, such as Liverpool.

- Within homes, there is a strong scientific rationale to test all residents, irrespective of whether symptomatic or not, given strong evidence of asymptomatic transmission in care homes.

- For the same reasons, there is a strong scientific rationale to test all staff working in homes (e.g., care workers, cooks, receptionists). As well as ensuring that these staff isolate, it will be important to ensure that the results can be linked to ALL of the care homes they have worked in, and follow-up testing in other homes conducted.

- Homes with positive returns should be re-tested on weekly basis to check of ongoing transmission. Similarly, homes with negative results *should be re-tested each week to* check for importation of disease or false negative results from previous testing rounds every week. Repeating testing of individuals with negative results would assist with identifying false negatives results.

- **DATA GAPS**: Regardless of testing strategy, the collection of data on individuals is critical to understand the transmission patterns and monitor efficacy of future interventions, specifically recording whether individuals are staff (by type of staff) and residents (including whether residents had joined/re-joined home recently) within the care home.

Response to Q4: **What impact may different approaches to reducing risk, including:**

a. Non-rotation of care workers (stopping care workers operating in multiple homes)
b. Cohorting of residents
c. Handwashing, IPC, regular surface cleaning and monthly deep cleaning

Non-rotation of care workers

- We can say with medium confidence that reducing the interaction of a people in a care home with the wider community will reduce risk of C-19 importation, which is key to effective shielding. This may involve reducing contact between staff and community (including stopping work in multiple homes) and testing new residents coming into care home, with isolation for people testing positive for COVID19.