**Impact Matters: Responding to Covid 19**

The visual notes have been created within a template which utilises the University of Liverpool’s ‘Making an Impact 2022’ and the Academy’s colour schemes of dark purple, a golden orange and accents of pink, green and blue. The bottom of the note includes a colourful banner incorporating the Making an Impact 2022 visual which includes bright colourful triangles. The Academy which has a purple background and a colourful pyramid of stripes. A second Academy banner focussed on Researcher Development which has a white banner with an image made up of four colourful petals (purple, pink, green and orange) It states “positive and inclusive research culture”. The final banner is the logo of the University of Liverpool featuring a blue shield with three doves and a book in the centre. Underneath this runs the social media information:

www.liverpool.ac.uk/research er/making-impact

#unilivimpact22

@LivResearcher

@LivUniAcademy

And the words “illustrated by @swantonsketches”

The top left corner of the note features a portrait of the key note speaker, Professor Calum Semple, University of Liverpool – for ISARIC4C (isaric4c.net). It is a purple monochrome portrait featuring a white man wearing glasses. He has a bald head and a moustache and beard. He is wearing a shirt, tie and waistcoat. Accents in the tie have been picked up in bright pink.

The title of the talk ‘Impact Matters: Responding to Covid 19’ is captured in purple text on an orange banner along the top. Prof Semple’s name and details are under this in white writing on a purple banner.

The top portion of the visual note state that Infectious disease outbreaks are certain and that they require rapid research capacity to confirm:

* The disease
* What impact on society
* Develop mass diagnostics
* Identify and test therapeutics.

The note reads “2011 – Establishment of the International Severe Acute Respiratory and Emerging Infections Consortium (ISARIC) – to prevent illness and deaths from infectious disease outbreaks”

An arrow pointing right states “Now includes 52 networks representing 132 countries” There is a drawing of the globe behind the arrow. To the right is an orange container including the words “Clinical Characterization Protocol” to illustrate the tools developed. The protocol asks:

* Who is affected?
* What does the disease look like?
* Why are people dying.

An orange banner running across the whole note from left to right includes the following words in purple text “The Clinical Characterization Protocol in responding to Covid 19”. Underneath seeks to capture the key elements of the keynote talk.

Underneath on the left hand side is a drawing of a layer cake with 4 candles. The layers are labelled from the bottom:

“data collection”

“samples”

“serial samples”

“expert resources”

To the right reads “Protocol involves different levels of contribution (depending on facilities/resources).

An arrow is drawn to the side of the cake pointing right reading “Feb 2020” and “used to report on a cohort of patients infected with virus in Wuhan, China – data indicated this was a severe illness”.

Underneath the cake is a drawing of the United Kingdom with orange lines connecting city hubs throughout the nation. To the right of the map reads the following:

“Data gathered from 303,251 patients (from 348 sites as of Feb 2022) – hubs where clinical data were coordinated. Material RAPIDLY distributed to the BEST scientists who could do the BEST research in time to make a difference”

An arrow leads to this to a box which reads “How does a study like this demonstrate impact?” and underneath reads:

* 119 papers
* 7642 citations
* Data provided to 102 investigator groups
* 23000 samples shared
* Trust equity – NHS, HEIs
* Embedded in policy advisory groups

An arrow reads to this which says “What about REF?”

Underneath this states “Impact for REF predicated on PUBLICATIONS? This is illustrated to the right with the colourful altmetrics citations image – a circle with colourful sections where the section colours represent altmetric categories.

“This work has informed public health activity but may not be included in Scientific literature – studies emerging “measure” differently on impact”.

An arrow is drawn pointing to four examples on the right hand side.

The first example relates to hospital acquired Covid 19 which is illustrated with a health professional in full PPE. It reads “data confirmed patients were catching covid after admission – led to interventions to prevent this, but reticence to publish (undermine NHS morale)” The altmetrics drawing to the right has 1946 in the centre and 27 citations.

The second example relates to samples to develop diagnostic assays. Critical enabler of work by others but will not be cited… It also informed tests used by Test and Trace – and is illustrated by a drawing of a lateral flow test. The drawing of the Altmetric drawing has a question mark in the centre.

The third example is Material to validate the AZ vaccine…. Dame Professor Sarah Gilbert’s Lancet publication has generated high altmetric scores of 15368 and 1878 citations; 13 policy documents and this work has saved millions of lives. A speech bubble is drawn on the right which reads “Can we claim this output?”

The final example is Covid symptoms in children - and how this informed vaccine prioritisation policy and policy on reopening schools with the relatively low altmetrics scores presented next to it.