Preventing COVID-19
Behaviour change

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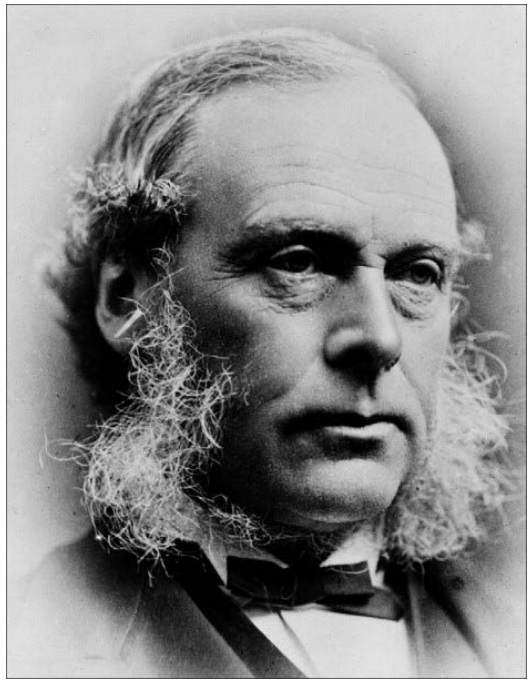
Behaviour change

- Covid may be with us for a long time

- Shift from virology and infectious disease to behaviour change

Changing behavior is complex and difficult



668 THE LANCET,] ON THE ANTISEPTIC SYSTEM OF TREATMENT IN SURGERY. [Nov. 30, 1867.

the excitement of travel, is all they require. Horace was very hypochondriacal when he wrote: "Cœlum, non animum, mutant qui trans mare currunt." It is simply cruel if we have no better grounds for sending our patients abroad than to give them change; and at the present time we are, on account of the prevalent tendency (is it not almost a mania?) for travel, as frequently called upon to urge means of cure at home as to point out a place of residence at a distance. This, however, *en parenthèse*. The object of these remarks is to enforce the necessity of examining into the history of disease as it exhibits itself in different localities. Whether there be a varying type of disease at different ages of man, it is not my present purpose to discuss; but there is no doubt that the type of disease varies much in different localities. Dr. Chambers* has recently shown convincingly that the Italian climate is characterised by stimulating properties which influence the form and duration and symptoms of disease occurring among Italians. Disease in Italy is essentially acute; so that chronic diseases, comparatively seldom originate there. A distinguished Italian physician, Dr. Pantaleoni, who knows England and France, told Dr. Chambers "that of Italian patients he had ninety-five to five chronic, and those latter chiefly hysterical and neuralgic; whereas, as he justly said, in the case-books of London physicians the proportions might be inverted without being far wrong." If we wish for a climate almost antipodal to that of Italy, we find it in the Channel islands, and especially in Guernsey. Here there is a remarkable absence of acute disease. The remarks of Dr. Hooper† with regard to Jersey, endorsed by Sir James Clark,‡ are to the effect that the most prevalent disease is chronic rheumatism; dyspepsia, diseases of the liver, and dropsy are also prevalent. Scrofula is common. Intermittent fevers are said to be rare; remittent fevers are common. Phthisis is said not to be frequent; inflammatory diseases are not of acute character, and the natives do not bear bleeding well. If we turn to the account given by Dr. Hoskins of the sanitary condition of Guernsey, we meet with a very similar state of things. Severe acute disease is almost unknown. Pleurisy, pneumonia, peritonitis—in fact, all acute diseases of the serous membranes or parenchymatous structures, are rare; acute rheumatism or rheumatic fever is equally unusual; while the prevalent malady—one very much under the control of the individual—is dyspepsia, brought on by irregularities of diet. In fact, considering the general fate of man, it would almost appear as if this were the true sanitary Eldorado, and the only fault to be found with it was that the islanders were too well off.

From the brief summary of the meteorological conditions of the island, and the various facts above stated bearing on its sanitary relations, we appear to be justified in concluding that patients suffering from a general irritative constitution, irritable mucous membranes of the air-passages, of the stomach or intestinal canal, are likely to benefit much by a transference, especially during the winter, to the climate of the Channel islands, and *par excellence*, Guernsey. Old people and children who are unable to face the bleaker winds and colder temperature of more northern latitudes or continental countries of the same, or even more southerly latitudes, are likely to find here a climate adapted to their constitutions—a climate that for them would be tonic and regenerating; as for the class previously mentioned it would prove soothing and restorative. Our friends and patients who return to their native land from India or Australia, or other tropical or antipodal regions, would here find a transition stage that would prepare them for their residence at home, where otherwise they only too often find that cold and damp develop trifling ailments into more serious disease, or originate bronchial and intestinal mischief previously unknown to them. The islands are essentially analogous to the winter residences on the south-west coast of England, while they present many features of botanical, archæological, and historical interest which would make them attractive to those members of families who did not go for health sake, but from attachment to an invalid. And for children there is the special advantage of excellent opportunities of education either at Jersey or Guernsey, an advantage enhanced by the fact, easily appreciated by fathers of large families, that its cost is almost in an inverse proportion to its quality.

For my own part I am surprised that we have so long neglected opportunities so readily available, and that we have not before now established on the southern coast of Guernsey a sanitary station, with most of the advantages of more distant and fashionable winter resorts, and with all the comforts and luxuries of home itself. This is not the place to enter more into detail, but I trust I have said enough to induce others to go and inquire for themselves, and to verify for themselves the impressions I have received by personal examination, and confirmed by some inquiry into the scientific data collected by others.

* Some Effects of the Climate of Italy, 1865.
† Observations on the Topographic, Climate, and prevalent Diseases of the Island of Jersey. By Geo. S. Hooper, M.D. 1827.
‡ The Sanative Influence of Climate. Fourth Edition. p. 189.

ILLUSTRATIONS OF THE ANTISEPTIC SYSTEM OF TREATMENT IN SURGERY.

By JOSEPH LISTER, F.R.S.,
PROFESSOR OF SURGERY IN THE UNIVERSITY OF GLASGOW.

No. I.

DECOMPOSITION or putrefaction has long been known to be a source of great mischief in surgery, and antiseptic applications have for several years been employed by many surgeons. But the full extent of the evil, and the paramount importance of adopting effectual measures against it, are far from being generally recognised.

It is now six years since I first publicly taught in the University of Glasgow that the occurrence of suppuration in a wound under ordinary circumstances, and its continuance on a healthy granulating sore treated with water-dressing, are determined simply by the influence of decomposing organic matter. The subject has since received a large share of my attention, resulting in the system of treatment which I have been engaged for the last three years in elaborating. The benefits which attend this practice are so remarkable that I feel it incumbent upon me to do what I can to diffuse them; and with this view I propose to present to the readers of THE LANCET a series of illustrative cases, prefacing them with a short notice of the principles which it is essential to bear in mind in order to attain success.*

The cases in which this treatment is most signally beneficial are divisible into three great classes—incised wounds, of whatever form; contused or lacerated wounds, including compound fractures; and abscesses, acute or chronic—a list, indeed, which comprises the greater part of surgery. In each of these groups our aim is simply to prevent the occurrence of decomposition in the part, in order that its reparatory powers may be left undisturbed by the irritating and poisoning influence of putrid materials. In pursuing this object we are guided by the "germ-theory," which supplies us with a knowledge of the nature and habits of the subtle foe we have to contend with; and without a firm belief in the truth of that theory, perplexity and blunders must be of frequent occurrence. The facts upon which it is based appear sufficiently convincing. We know from the researches of Pasteur that the atmosphere does contain among its floating particles the spores of minute vegetations and infusoria, and in greater numbers where animal and vegetable life abound, as in crowded cities or under the shade of trees, than where the opposite conditions prevail, as in unfrequented caves or on Alpine glaciers. Also, it appears that the septic energy of the air is directly proportioned to the abundance of the minute organisms in it, and is destroyed entirely by means calculated to kill its living germs—as, for example, by exposure for a while to a temperature of 212° Fahr., or a little higher, after which it may be kept for an indefinite time in contact with putrescible substances, such as urine, milk, or blood, without producing any effect upon them. It has further been shown, and this is particularly striking, that the atmosphere is deprived of its power of producing decomposition as well as organic growth by merely passing in a very gentle stream through a narrow and tortuous tube of glass, which, while it arrests all its solid particles, cannot possibly have any effect upon its gases; while conversely, "air dust" collected by filtration rapidly gives rise simultaneously to the development of organisms and the putrefactive changes. Lastly, it seems

* This plan seems preferable to combining the formal communication, of which Part I. has appeared in preceding pages of this journal, since I shall thus be left untrammelled as to the order in which the subjects are introduced, and shall be at liberty to notice from time to time any improvements that may suggest themselves in the methods of dealing with the various classes of cases.—J. L.

- Handwashing in a hospital is vital and (relatively) easy

YET

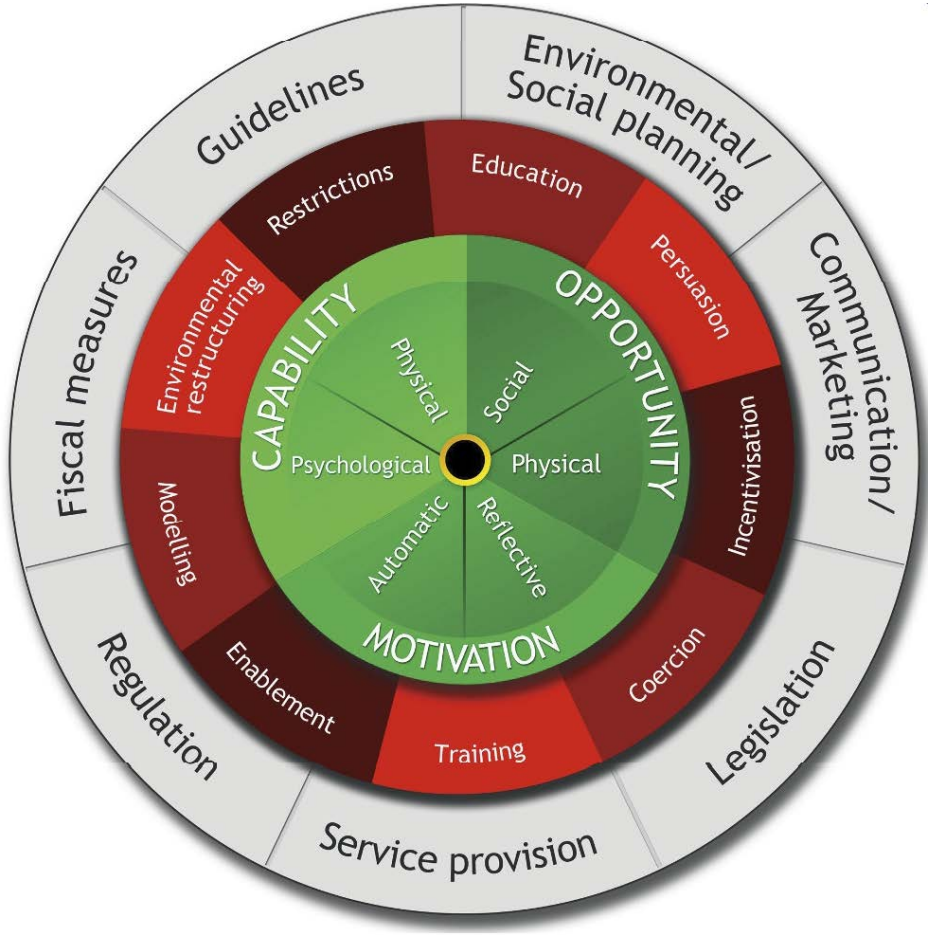
- Many hospitals are unable get their hand-washing rates above 50%

Behaviour change wheel

1. People must be able to undertake the behaviour – without soap and water there is no washing of hands

2. Environment has to facilitate the required behaviour – self isolation in a one roomed shack shared by 6 people is impossible

3. People must be confident that they can make the required changes – sense of agency and self-efficacy in the world

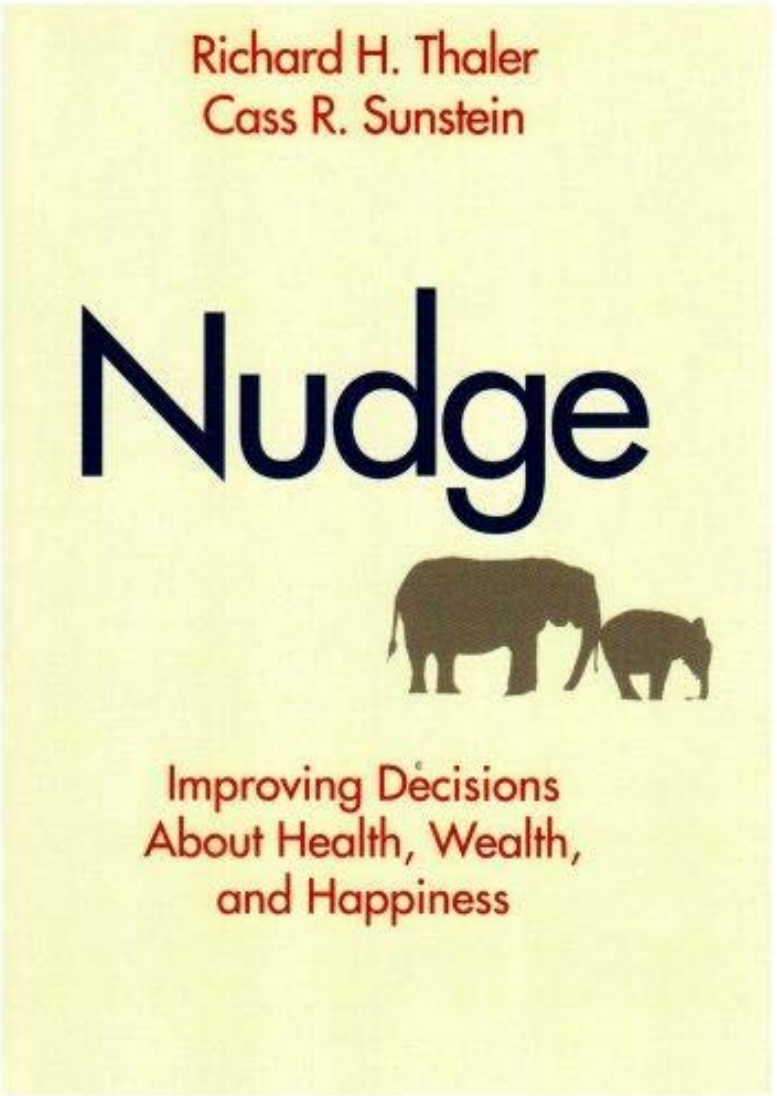


Thinking fast and thinking slow

- Daniel Kahneman - two-system theory for how people process information
- System 1 - Thinking Fast: processing is automatic, fast and highly susceptible to influences from the environment
- System 2 - Thinking Slow: processing is more reflective, much slower and takes into account goals and intentions
- Hoarding of masks example
- When people feel scared and helpless they may well respond with defensiveness or anger

Enabling environments

- Nudging redesigning environments
- Modifying choice architecture
- Assists in aligning people's immediate choices with rational choices
- Not punitive or legislative



Information is not enough

- Knowledge Attitude Behaviour
- Passive social media messages discouraged
- Social media messages work best when:
  - rich in information
  - sent at times where uptake is most likely
  - some active engagement between those sending and receiving messages is possible

Trust and community engagement

- Lesson from Ebola – public involvement in decision-making
- Local leaders, faith and civic society leaders involved - adherence will improve
- Singapore govt in SARS - transparent rational - fully acknowledged uncertainty - thus allowing policy shifts

Coercion

- People are averse to penalties
- Punishment does not work
- As force and coercion goes up – breach in trust – and you lose the most valuable asset there is – co-operation

What do to

- Community health workers
  - door to door to hand out masks
  - educate households about hand washing
  - problem solve ways to protect elderly family members
- Coronavirus picture throughout public toilets to encourage hand washing
- Alcohol-based hand sanitizers where they are visible
- Markers on the floor to assist with social distancing