BIOFILMS & HUMAN HEALTH

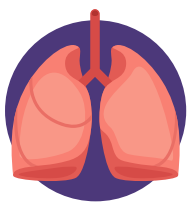
# The Human Cost of Biofilms

National Biofilms Innovation Centre

#BIOFILMAWARE

Biofilms have a **significant impact** on human health. This is estimated to be:

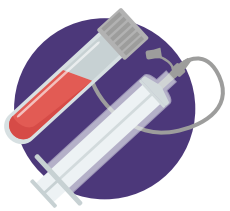
## $7.2BN IN THE UK AND $387BN GLOBALLY



## CYSTIC FIBROSIS

UK: $493M GLOBAL: $7.5BN

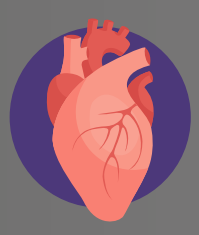
The mucus produced in the lungs of cystic fibrosis patients is colonised by biofilm forming pathogens. In the UK cystic fibrosis accounts for **9,500 hospital admissions** and **over 100,000 hospital bed-days** every year. More than **70,000 people** worldwide are living with cystic fibrosis.



## CENTRAL VENOUS CATHETER BLOODSTREAM INFECTION

UK: $38.7M GLOBAL: $11.5BN

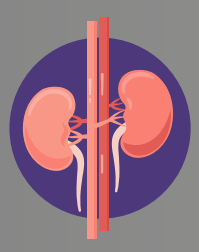
Biofilms colonise catheters and can lead to infection. A European study in 2009 estimated that **210,000 central venous and arterial catheters** were placed annually in the UK leading to **8,940 bloodstream infections.**



## PROSTHETIC CARDIAC VALVES AND PACEMAKERS

UK: $3M GLOBAL: $220M

The risk of infection is around **1%** for a new device and **3%** for a replacement device. Over **one million pacemakers** are implanted globally. This infection is typically in the form of a biofilm on the artificial surfaces of the pacemaker. These can only be treated by surgery removal and replacement.



## CATHETER–ASSOCIATED URINARY TRACT INFECTION

UK: $99M GLOBAL: $1BN

Biofilms colonise catheters and can lead to infection. Around **150 million people** globally experience a urinary tract infection (UTI) every year; it is the most common bacterial infection among women, In England, **17.2%** hospital acquired infections are UTIs; they are the most common type of hospital acquired infection.