ACCOUNT

OFTHE

SUCCESS

OF

Inoculating the SMALL-Pox in Great Britain, for the Years 1727 and 1728.

WITH

A Comparison between the Mortality of the Natural Small-Pox, and the Miscarriages in that Practice; as also some general Remarks on its Progress and Success, since its first Introduction.

To which are subjoined,

- I. An Account of the Success of Inoculation in Foreign Parts.
- II. A Relation of the like Method of giving the SMALL-Pox, as it is practifed in the Kingdoms of Tunis, Tripoli, and Algier. Written in Arabic by his Excellency CASSEM AGA, Ambassador from Tripoli. Done into English from the French of M. DADIGHI, his Majesty's Interpreter for the Eastern Languages.

By JOHN GASPER SCHEUCHZER, M.D. F. R. S. and of the College of Physicians.

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Dr. SCHEUCHZER's

ACCOUNT

OF THE

SUCCESS

OF

Coculating the SMALL-POXx !

For the Years 1727 and 1728.

(Price One Shilling.)

An Account of the Success of Inoculating the SMALL-POX, &c.

HE following Undertaking, I prefume, will need no Apology. allowed on all hands, and indeed the many and deplorable Instances of the Severity of the Small-Pox, we daily meet with, too evidently convince us, that it is a Point of very great Importance to Mankind, by a continued and impartial Enquiry to determine, whether or no the Practice of Inoculation, which was fome Years fince introduced in this Country, appears by Experience in any wife beneficial to fave the Lives of some out of those many, who would otherwise, in the Course of Things, in all human Probability, fall a Sacrifice to this terribly A 2

terrible Diliamper; and confequently whether it deserves to be encouraged, as laudable, uteful, and falutary: or whether it ought to be rejected, as hazardous, of uncertain Success, and attended with ill Confequences.

Nothing certainly can be more conducive to this end, than from time to time to lay before the World such well-attested Matters of Fact, as may enable every one, by natural, easy, and unavoidable Consequences drawn from them, for himself to form a Comparison between the Mortality of this Distemper in the natural Way, and the Succeis, whether good or bad, that attends the Practice of Inoculation. This hath been done for some Years past with that Candour and Impartiality by the learned Dr. Furin, as deservedly merited the favourable Reception, his annual Accounts of the Success of this Practice have met with; and I should have thought it an unpardonable Presumption to take it out of such able Hands, if he had not both in publick and private declared his Resolution not to go on with them any longer. As for myfelf, 'twas not till some time after, and when no body else seem'd disposed to engage in it, that I determined to take the Pains upon me, rather than suffer it to be altogether dropt.

dropt. If my Endeavours should prove in any wife serviceable to the Publick, as I had great reason to believe they would be agreeable to some of my particular Friends, I shall think my Labour sufficiently well bestowed.

. It was a very great Encouragement to me, that when I acquainted the Royal Society with my Intention, they were pleased to approve of it, and at my Request to grant me the Liberry of perusing and extracting fuch Papers relating to this Practice, as were or should be transmitted to them, efpecially those that had been deposited with them by Dr. Yurin, an Extract whereof he had not yet inferred into his annual Ac-Neither can I in justice to this 'Gentleman forbear, in this publick manner, to return my grateful Acknowledgments for his kind Communication of fuch other Acgounts, as he received fince that simes aild I do not in the least doubt of the Continuance of his favourable Affiftance for the fu-. eute.

What I am now going to offer to the Publick is an Account of the Success of the Practice of Inoculation for the Years 1727 and 1728; and I purpose, God willing, to continue the same from Year to Years

Year; promising myself, from the Ulefulnels and Importance of this Delign, that all Perions concerned in this Practice will readily oblige me with their Observations on its Succeis, whether good or bad. On my part, I can only youch for the Sincerity of my Intention, and that I shall make it my constant Endeavour, free from any private Views, to act the Part of an Historian, and with all possible Faithfulness and Impartiality to represent Facts, as upon Inquiry'I shall find they are. I am very sensible, that it will be extremely difficult for me to content two opposite Parties, which have hi--therto appeared, not without a good deal of Zeal and Warmth, one for, the other against Inoculation: and that, whilst the Favourers of this Practice will perhaps find room to complain of my representing its Hazard much greater than it really is, by inferting into the List of those suspected to have died by Inoculation, Perfons whose Death they will pretend was owing to other Causes the Anti-Inoculators will nevertheless think me partial, if even after granting every thing they can reasonably pretend to, the Odds - should still appear in favour of the Practice. My Security; and Satisfaction shall begin a Arice Regard to Truth; and as I shall confine myself only to Matter of Fact, and such plain and easy Deductions, as must necesfarily unily follow from thence, to in case of any Doubt arising, I shall be ready upon all Occations to produce my Vouchers for what I advance. I thall think no trouble too great to come at the true State of Things, but if after all I should happen to be misinformed in any particular Case, I shall be very thankful to any, that will please to set me right, and will not fail in my next candidly to acknowledge and correct the Mistakes. hope I shall be easily excused from entring into any other Controversies on this Subject, both as I can employ my time much better, and as in the end all reasoning, however specious and plausible, will never be thought sufficient to overbalance the plain and convincing Evidence of Matter of Fact.

The Fate of Inoculation hath been very judiciously stated by Dr. Jurin, principally to depend upon the Decision of the two following Questions.

- oculation be an effectual Security to the Patient against his having the Small-Pox in the natural Way?
- 2. Whether the Hazard of Inoculation be confiderably less than that of the natural Small-Pox?

Should either of these two Questions once come to be fairly determined in the negative, the Practice of Inoculation, I believe, would be no longer supported. For it cannot be prefumed, that any one would run the Hazard of Inoculation, unless he may depend upon its effectually securing him from having the Small-Pox in the natural Way; the rather as there is some Chance, tho' perhaps not very considerable, for his not having the Distemper at all. Nor can it be supposed, in case the Hazard of Inoculation should be found by Experience equal to that of the natural Small-Pox, I will not fay greater, that any one would be either so far bereaved of his Senses, as to advise the Operation, or that he would find People venturesome enough to undergo it. But if on the other hand, those Persons, who have had the Small-Pox given them by Inoculation, should appear by Experience to be thereby effectually fecured against undergoing that Distemper a second time in the natural Way, and if the Hazard of the inoculated Small-Pox comes out less than that of the natural one, I believe every prudent and thinking Person, that hath the Good of his Country, and the Preservation of his Relations and Friends at heart, will look upon Inoculation as a Practice beneficial to Man-2

Mankind, and which therefore ought to be encouraged.

As to the first of these two Questions, Dr. Jurin, in his annual Accounts of the Success of Inoculation, particularly that for the Year 1725, hath, I think, sufficiently shewn, both from Reason and Experience, that the affirmative Side is highly probable, and withal how very little Credit he found, upon Enquiry, was to be given to several Stories, that were very confidently reported abroad, of Persons who had the Small-Pox by Inoculation, but afterwards underwent the Distemper a second time in the natural Way. Neither could I hear of any one fingle Instance to the contrary, that offered in the Course of the two last Years; so that, for ought it hitherto appears, by about eight Years Experience, Inoculation proves an elfectual Security against the natural Small-Pox, and even those that had but an imperfect fort of Small-Pox by Inoculation, feem to be equally fafe from that Diftemper in the natural Way. There have been indeed fome Instances, where Inoculation had no manner of effect on the Persons inoculated; and some of these have been asterwards seized with the natural Small Pox; neither is there any ground to suspect, that where the Operation doth not produce its

ap-

appeared, which tho' they never filled and suppurated, like the rest he had incoulated, were judged to be the real SmallPox."

I go on therefore to what I have to offer from the two last Years Experience towards determining the second of the two Questions proposed; viz. Whether the Hazard of Inoculation be considerably less than that of the natural Small-Pox.

And first as to the Hazard of the natural Small-Pox, it appears by Dr. Jurin's former

Accounts, that

out of Sick of th	e Small Pox. 18089	Dicd.
At Uxbridge, and in the	,	_ / J Z
Neighbourhood, the		*
' Small - Pox having		
been exceedingly fa-	,	y2.
tal all thereabouts,		* :
communicated by Dr.	·	•
Thorold.	140	<i>5</i> I
		factorization of
Total .	18229	3008

So that out of 18229 Persons of all Ages, who had the Small-Pox in the natural Way; in different Years, and at all Seasons, there died 3008, that is, one in fix, which, considering

may well lay down for the Hazard of the
natural Small-Pox.
estate of the second
The Account of Inoculation for the
Years 1727 and 1728 is as sollows.
The state of the s
inoculated in and about London.
By Claudius Amyand Esq. Sergeant-Sur-
By Claudius Amyand Esq. Sergeant-Sur- geon to his Majesty in 1727 In 1728
In 1728 By Mr. Alexander Small Surgeon, in 1726 2 In 1727
In 1727
In reak
By Mr. Maitland Surgeon, in 1727 4
By Mr. Robert Talbot Surgeon, (under the Direction of the late Dr. Freind)
· 10 1727
By Mr. Robert Baker Surgeon, in 1727 In 1728, (three of these were inocu-
lated under the Care of Dr. Jurin 5
By Mr. John Wemyes Surgeon, in 1727.
In and about Hallifax.
By Dr. Nettleton, in 1727
and the state of t
Zierk.

York.

By Mr. Naish, Surgeon, in 1727

Durham.

By Mr. Maitland, in 1727

Sevenoak in Kent.

By Mr. Lake Senior Surgeon, in 1727, (including one inoculated at Green-wich)

In and about Warminster, in the County of Wilts.

By James Elderton, M.L. of Salisbury, in 1727

At Grockerton, near Warminster, in the same County.

By Mr. Nehemiah Towgood of Shepton-Mallet in Somersetshire.

Dinkam

5

Denham in Bucks.

By Dr. Thorold of Uxbridge in 1727. 17. 18. In 1728

¿Chertsey in Surrey.

By the same, in 1724

Greenford.

By the fame, in 1725

In and about Uxbridge

By the same, in 1728 well still 3

At Newbegin, three Miles from Newcastle.
By Dr. Tim. Bennet, (fince removed to armouth in Norfolk) in 1728

Total 124

N.B. Those that are mentioned to have been inoculated before the Year 1727, were not inserted in Dr. Jurin's former Accounts.

The

The following Table contains the several Ages of the Patients, with the Success of the Operation, in the same manner with those published before by Dr. Jusin.

Age	Perfoss-In- oculased.	Had the Small Pox by Inocu- lation.	stad an imper- feet Small-Pox by Indiviation.	No Effect.	Suspected to bace died of Inoculation.
Under 1 Year	5	5	O	o	Z,
r Year to 2	1.0	10	ò	a	Ĭ.
2 to 3	10	· Io	0	0	0 '
3 .to.4	15	15.	0 '	0	o,
	11.	11	. 0	О	, %
4 to 5 to 10	35	35	o,	O٠	0
10 to 15	118	18.	0	0	O '
	. 6	6	. 0	0	, O , ,
20 8c.	12	9 '		2	0
Age unknown.	2	2	'ø	0	O,
	(Vanishing September 1	gramman and a second			Harrison 1
Total	124.	121		2	3.,

I am now to give an Account of the Cases of the three Persons suspected to have died by Inoculation.

"I. A Son of Mr. Wansey's at War"minster, aged a Year and a half, was
"inoculated December 1. 1727. He had
the Distemper very favourably, not
C "above

"above forty Pustules in his Face and Neck, and few or none in his Body. His Incisions run well, the Pustules came to full Maturity the seventeenth or eighteenth Day from the Inoculation. The Child being for some time perfectly well, died in nine or ten pays after." Mr. James Elderton, in bis Letter to Dr. Jurin, dated at Sarum, Jan. 18. 172-73.

- " II. Enoch Trumble, aged eight Months, " was inoculated at Newbegin, three " Miles from Newcastle, in February 16. " 1727, with one small Incision in the " Arm, at a time when the Small-Pox " were frequent and fatal in that Part " of the Country. On the eighth Day " after Inoculation he first began to be " a little disordered. On the ninth Day " I observed three or four crystalline " Eruptions about the Toes, which with " several more that afterwards appeared " on the Feet and Legs, (fome of " which increased in the Progress of the " Distemper to at least treble the Big-" ness of the ordinary Pustules in the " large distinct fort of Small-Pox) when " opened contained a limpid inodorous " Water. On the tenth Day in the E-" vening

" vening he had a slight Convulsion-" Fit, and on the eleventh early in the " Morning, several Pustules appeared of " the distinct fort of a very good Co-" lour, and the Fever, Restlessiness, and " other Symptoms, very much abated. 4. At Night the Child was seized with a " cold Fit and Fever succeeding it, and " from that time the Pustules lost their " beautiful red Colour, and most of them " never fill'd kindly, but appeared flat " and dimpled. I ought to observe, " that a few Days after the Operation, " the Mother, who was also Nurse to " the Child, was seized with the Return " of an Ague, which both she and the " Child were afflicted with about two "Months before. From this Conjunc-" tion of the variolous Fever and Ague, " as I took it to be, a new Disease " feemed to be formed with contra-indi-" cating Symptoms: While Nature with " her joint Force was endeavouring to " expel the variolous Matter to the Sur-" face, an half an Hour's Fit of a chill " Ague would confound the whole De-" fign. This was the State of the Cafe " in the Beginning, but after a few Days " I conceived confiderable Hopes from a " happy Metastasis, and consequent upon

on that an Abatement of all the heteroclite Symptoms, that must necesfarily proceed from so consused a Case. 6 For on the fifteenth Day on one of the Arms, on the fixteenth Day on the other, and about two Days after 'e on the great Toes, immediately unce der the common Integuments, white G Swellings appeared, not inflamed, red, " or tense, and very little sore, but " seemed to be barely a Translation of " the purulent Matter denied Entrance " to the Surface, and being opened a-" bout two or three Days after their first " Appearance, they discharged a matu-" rated Pus, like that in the ripe Pu-" stules, from the Elbows each about " half a Spoonful. By the Help of this " Discharge Matters proceeded tolerably well, and I began scarce to doubt of " the Child's Recovery; for by this time " the Pustules, tho' indeed never well " filled, were arrived to a State of Ma-" turation, and seemed to form laudable " Pus, and on the eighteenth and nine-" teenth they began to incrustate, espe-" cially on the Face and Legs, and foon " after to scale off. I ordered a proper " Purgative to be administred, and I think " repeated, and left the Child in a recovering covering

"covering Way. Somewhat less than a Fortnight after I was sent for in great haste, but sound the Child was dead before I got there. I could one ly learn that he had two or three Returns of an irregular Fever, attended with great Restlessness, which its probable was the intermitting Fever that I said I did believe was complicated with the Small-Pox, and remained after it." Dr. Tim. Bennet, in a Letter to me, dated at Yarmouth, March 12.

III. The Son of a Person of Quality, (whose Name I am desired to conceal) eleven Years old, was inoculated in London at the beginning of April, 1728. He sicken'd on the sixth Day from the Operation, and but sew Pustules appeared between the eighth and ninth. He died, as I am informed, in about sisteen Days from Inoculation. As I have not myself obtained any farther Particulars relating to the young Gentleman's Case, I hope the Reader will pardon my being so short.

By Dr. Jurin's former Accounts the whole Number of Persons, who had then had

had the Small-Pox by Inoculation, was feven hundred and twenty four, fourteen of which had been suspected to have died of Inoculation; and the two last Years we have three suspected to have died out of an hundred and twenty one, that is in all feventeen out of eight hundred and forty five, or nearly one in fifty. Whether or no the first of these three can be fairly faid to have died of Inoculation, and how far the intermitting Disorder of Enoch Trumble, as well as that of his Mother, whom he continued to suck during the Course of the Distemper, might have been instrumental in occasioning the Death of the Child, is submitted to the Judgment of every impartial Reader. If we deduct one, as I believe the Favourers of Inoculation will think it reasonable we should, inasmuch as even the greatest Advocates of this Practice never pretended to recommend it as a Security against other Distempers and Accidents, the Hazard of Inoculation will be that of fixteen out of eight hundred and forty five, or one in fifty two. If both be deducted, it will be that of eight hundred and forty five, or one in fifty fix.

Thus far, what I had to offer from the two last Years Experience towards determining the fecond of the two Queftions proposed, viz. Whether the Hazard of Inoculation be confiderably less than that of the natural Small-Pox. To clear up this Matter still farther, I have thought it would not be improper to lay before my Readers at one View, which I have done in the following Table, the Progress and Success of this Practice in Great-Britain, from the Year 1721, when the first Experiments were made on some of the Malesactors, then under Sentence of Death in Newgate, to the End of the Year 1728, and to subjoin fome Remarks, tending either to enforce, or farther to illustrate the Observations formerly made by Dr. Jurin.

A Table containing the several Ages of the Persons inoculated in Great-Britain, from the Year 1721, to the End of the Year 1728; together with the Success of the Operation, in the same manner with those published before.

Age.	Perfons snoru-	Had the Small Pox by Inocu-	Had an im- perfest Smalt Pox.	No-Effeth.	Sufpected to bave died.
Under 1 Year.	24	24	٥٥	00	2
1 Year to 2		33	00	or	4.
2 .to 3	34 65	65	00	00	7
3 to 4		88 .	QQ	03	g g
*	91 65	63	00	02	l x
4 to 5 to 10	257	249	03	05	1 3
10 to 15	140	131	01	08	
15 to 20	104	95	03 06	06	2
20 E.	110	91	06	13	2
Ageunknown.	7	6	00	oı	0
		Anna Santana Marana		€ eman(a)	
Total	897	845	13	39	17

Now it appears from this Table,

That out of eight hundred and ninety seven Persons of both Sexes and all Ages, that were inoculated in Great-Britain, in the Course of eight Years, eight Small-Pox by Inoculation, to which if we add thirteen, who had an imperfect Small-Pox, the whole Number of Perfons, upon whom the Operation produced some Effect, will be eight hundred and fifty eight.

That in young Children the Operation more constantly produced its intended Effect, than in Persons of more advanced Years, there being none under sive Years of Age, who did not receive the true Small-Pox by Inoculation, and but three from five Years to ten; four from ten to twenty; and six from twenty and upwards, who had an impersect fort.

That it had no Effect upon thirty nine out of eight hundred and ninety seven, most of whom 'tis probable had had the Small-Pox before, which was known to be the Case of some, who were inoculated only for Experiment's sake, and was doubtful with regard to many of the rest.

That among those, upon whom the Operation had no Effect, there are many

more grown Persons in Proportion, than young Children, the Probability of their having undergone the Distemper in the natural Way increasing, as they advance in Years. Thus there is but one out of thirty nine under two Years of Age, ten from two to ten Years, and sourteen from ten to twenty, upon whom Inoculation produced no Effect. The remaining thirteen were all above twenty, and the Age of one is unknown.

That on the other hand, contrary to what is observed in the Course of the natural Small-Pox, the Hazard of Inoculation is greater to young Children than grown Persons, since among those sufpected to have died of it, there are

67 (577 627)	C19 Under 2 Years
3(216)	72 Between 2 & 5
3 > of < 249 > or < 1 > in	283 From 5 to 10
3\ /226\ /1\	75 From 10 to 20
27 617 617	45 Upwards of 20

Six whose Age was not known, are not included in this Table.

That the utmost Hazard of Inoculation that can be pretended to by the Opposers

polers of this Practice, is that of leventeen out of eight hundred and forty five, or eight hundred and fifty eight, that is, one inilififty. These were at least all that came to the Knowledge either of Dr. Jurin, or myself; though ris highly probable, that had there been any more whose Death could in any wife be looked upon as the Effect of Inoculation, they would not have fail'd being talk'd of as on the other hand there is a great deal: of reason to think confidering the Difficulty of collecting these Accounts, and the particular Humours of some People, that a good many are omitted for Want of Information, who went favourably through the Operation.

That all Allowances made, the Odds remain as much in favour of this Practice, as the Hazard of the natural Small-Pox, (which by the Calculations above, appears to be that of one in fix) exceeds the Hazard of Inoculation, which at the utmost is no more than that of one in fifty.

What I have hitherto advanced, is the bare Result of the Calculations and Tables above; and although upon the whole D 2 the

Practice, yet I am sensible the Inoculators will think it is still stated too much to its Disadvantage. They will urge from the respective Cases of those seventeen out of eight hundred and forty sive, or eight hundred and fifty eight, that were suspected to have died of Inoculation, as they are set forth in Dr. Jurin's former, and this present Account, that far from allowing Inoculation to have been the Cause of all their Deaths, considerable Deductions ought to be made, for the following Reasons.

That the seventh and fourteenth * Case ought to be left out of the Computation, because those two Persons had not in Fact received the Small-Pox by Inocu-

For the better understanding of these Remarks, the Reader is desired to have recourse to Dr. Juriu's sormer Accounts of the Success of this Practice, where he will find the sirst nine Cases in his Account of the Success of Inoculation to the End of the Year 1723, the tenth in his Account for 1724, the eleventh, twelsth, and thirteenth in that for 1725, and the sourceenth in that for 1726. The sisteenth, sixteenth, and seventeenth, are inserted in this present Account. (Vid. App. No.1.)

lation, their Death, though indeed sub-sequent to it, having been apparently owing to other Causes; in one to a nervous Fever, which carried him off near three Months after the Operation; in the other to a Hydrocephalus; and this latter died on the eighth Day from the Incisions, before any Appearance of an E-ruption.

That the tenth ought to be struck off from the List; the great Irregularities and Excesses in Drinking, even after he underwent the Operation, having been very evidently the Cause of his Death.

That the twelfth ought not to be taken in, because the Patient died of a malignant Fever, sixteen Days from the Eruption, when the Small-Pox was dry, and scaling off.

That the same Case, as also the eighth, should be left out of the Comparison, because even if it should be allowed, that they died of the Small-Pox, yet there is a great deal of reason to suspect, that they had received the Infection before in the natural Way, the Eruption appearing some

fome Days sooner, than is usual in the inoculated Small-Pox.

That several of those Persons, who are suspected to have died of Inoculation, having been either of a very sickly Constitution, or actually labouring under Diseases, though perhaps not perceived by the Inoculator, or concealed from him by their Parents; their Death cannot in justice be brought in to increase the Hazard of Inoculation, which should be performed with all proper Caution, and upon Persons of a healthy Constitution; and that on this account the fourth, sixth, eighth, and sixteenth Case ought to be left out of the List.

That all those also should be left out of the Question, who did not die in the Course of the Distemper, but by subsequent Disorders or Accidents, and after the Small-Pox was gone off; since neither in the Bills of Mortality they are brought in under the Article of the Small-Pox, but under the respective Diseases they happen afterwards to die of; and that on this single Account there may be room to strike off the sirst, second, fourth, fifth,

(31)

fifth, seventh, ninth, twelsth, thirteenth, and sifteenth.

That all these Deductions being made, there remain but three out of eight hundred and forty, five, or eight hundred and fifty eight, that is, one in two hundred and eighty one or two hundred and eighty six, that can be said to have died of Inoculation; and that perhaps even the third and eleventh Cases might be disputed from the Circumstances; and the seventeenth for want of a more particular Information.

How far the several Objections that have been, or may be brought by the Inoculators against the Estimate above, may be of Weight in reducing the Hazard of Inoculation below what it is here represented to be, every impartial Reader is left at Liberty to judge; and may upon perusal of the respective Cases of those Persons, that were suspected to have died of Inoculation, strike off as many as he thinks proper. If he sees Cause to deduct one out of seventeen, the Hazard will be that of one in sitty three or fifty four.

If he except

The Hazard will be

. 5	two.		i : \$ {	i io		
- • •	three)		66		-6i
~	four-			65		66
	five		, <u>, </u>	70		71
, .		()	, ,	(sugar	-	78
	sévén .	:	,	8#. 1	م	1 86 min
-	eight -	s one	117	94	or	.95
, ,	nine-			105		107
	tèn :			121	20,1	123
٠.	eleven			141		1437/21
	twelve		New York	169		171
	thirteen			211		214
	fourteen		 1	281		286
	<i>-</i> .		u	Tree Se	Ţ	أجرب

I purposely avoid entring into any Reasons and Speculations, either in behalf or against this Practice, any otherwise than as they naturally follow from Matter of Fact: but before I conclude, I will beg leave to add the following Comparison between the Mortality of the natural Small-Pox, and the State of Inoculation for eight Years last past, being the whole time this Practice has been carried on in this Country. A Table, shewing the Mortality of the Natural Small-Pox, from the Year 1721 to 1728 inclusive, compared with the State and Hazard of Inoculation during that time.

	Natural	Small-	Pox.		ไทองนใส	edSma	ll-Pox?
	Total	Died of	the Sm	all-Poss.	Jo.	Swaff Inocu-	
4 5 5	Number of Bu- rials.	In all:		In Pro- portion	r h. en	Had the Post of Post of I	Sufficated bance died Inoculation
was in				r r		## 42	744
1722	26142 25750	2167	84	12 12	2483	449	9
1724	29197	1227	47.		46		1
1726		1569	53	2 I 18 a)		102	3
	28418 27810		-	173	\$109	106	3
Total	218439	18281	83	12	897	845	17
At a Medium.	27,305	2285	83	12	1	•	

From this Table it appears,

That in the Course of eight Years last past, there died of the Small-Pox every Year at a Medium two thousand two hundred and eighty five Persons out of twenty seven thousand three hundred

and five, or a twelfth part of the total Number of Burials.

That the greatest proportional Mortality was in the Year 1725, when this fingle Distemper carried off three thoufand one hundred and eighty eight out of twenty five thousand five hundred and twenty three, or one eighth of the total Number of Burials. For although in the Year 1723 we have had three thousand two hundred and seventy one dead of the Small-Pox, yet in proportion to the total Number of Burials, which was then twenty nine thousand one hundred and ninety seven, it is but one ninth. The Mortality of this Diftemper was exactly the same in proportion, I mean one eighth of the total Number of Burials, in the Year 1681, when it carried off two thousand nine hundred and eighty two, out of twenty three thousand nine hundred and seventy one, or an hundred and twenty five out of every thousand: and again in the Year 1710, when there died of the Small-Pox three thousand one hundred and thirty eight out of twenty four thousand fix hundred and twenty, or an hundred and twenty feven out of every thousand. And

And it is remarkable, that these three Years were preceded by three very favourable ones; but fix hundred and eighty nine out of twenty one thousand and fifty three (that is one in thirty one of the total Number of Burials, or thirty three out of every thousand) having died of the Small-Pox in the Year 1680, and but one in twenty one in 1709, or a thousand and twenty four out of twenty one thousand eight hundred, which gives forty feven for each thousand, being exactly the same in proportion with 1724, when one thousand two hundred and twenty feven died out of twenty five thousand nine hundred and fifty two; that is again one in twenty one of the Number total, or forty seven out of each thousand.

That in the Year 1725, when the Mortality of the natural Small-Pox was fo very confiderable, the Practice of Inoculation proved notwithstanding very favourable, but three being suspected to have died out of an hundred and forty four, or one in 48.

If for Argument's sake we suppose, that the two thousand two hundred E 2 and

and eighty five, who died yearly of the Small-Pox, at a medium, for eight Years last past, had been inoculated, and allowing the Hazard of Inoculation to be, what it proves at the utmost, that of one in fifty, there would have died out of this Number only forty five or forty six; so that two thousand two hundred and forty Lives might have been saved annually.

But as it may be objected against this Estimate, that we ought not to form any Comparison merely and independently from the Number of those, who were carried off by the Small-Pox, but that we ought to consider the Matter with regard to the Number total of Perfons of all Ages and Constitutions, who must have been sick of this Distemper to occasion such a Mortality; let us see what the Case would have been then. The Hazard of the natural Small-Pox appears by the Calculations above to be that of one in fix, and two thousand two hundred and eighty five Persons having died of it yearly at a medium, it follows that thirteen thousand seven hundred and ten must have been sick of the Distemper at a medium every Year. Now suppoling

have been universally prevalent, and allowing its Hazard to be as that of ten to fifty, there would have died out of that Number two hundred and fifty four or two hundred and fifty five, instead of two thousand two hundred and eighty five, and consequently at least two thousand Lives would have been faved annually out of two thousand two hundred and eighty five, and fixteen thousand and upwards, out of eighteen thousand two hundred and eighty one, who actually perished by this Distemper only, in the Course of eight Years.

If on the contrary the eight hundred and forty five who received the Small-Pox by Inoculation had been infected in the natural Way, an hundred and thirty or an hundred and thirty one would have been loft out of that Number, instead of seventeen: so that Inoculation may be reckoned to have actually saved an hundred and thirteen or an hundred and fourteen Lives, which would have otherwise perished by this Distemper.

Upon the whole it is submitted to the Judgment of every impartial and well-meaning

meaning Person, who will be at the trouble fairly and maturely to weigh the several Matters of Fact here laid down, and the Consequences drawn from them, whether the Practice of Inoculation ought to be rejected as dangerous and uncertain; or whether it doth not rather deserve Commendation and Encouragement, as salutary and greatly beneficial to Mankind.

APPENDIX.

Some Account of the Success of the Practice of INOCULATION in Foreign Parts.

Several Persons having been very defirous to know what Progress the Practice of Inoculation made, and with what Success it was carried on in Countries beyond Sea, I have thought proper for their Satisfaction to publish the following short Abstract of several Accounts either formerly transmitted to Dr. Furin, or received since. I am far from thinking them so complete as I could desire, for which reason I chose to publish what I had to say on this Head

by itself, and independently from the Account of the Success of this Practice in Great Britain. Neither will I as yet pretend to draw any Inferences from thence, but content myself with a bare Narrative of Matter of Fact, till by receiving ampler and more particular Informations, for which I shall be very thankful, I shall be better able to form some Estimate of its Hazard compared with that of the natural Small-Pox.

A List of the Persons inoculated in Foreign Parts.

In New England.

At Boston and in the neighbouring Towns.

By Dr. Zabdiel Boylston in 1721 and 1722.

At Roxbury in Cambridge.

By Dr. Roby in the same Years 11
By Dr. Thompson at the same time. 25

In Ireland.

At Dublin.

By Mr. Hannibal Hall, Surgeon, in 1723, 1724, 1725, and 1726. 16

By Mr. John Nicholls

4

Five Children inoculated in August, 1725

N. B. The Case of these five Children was published at Dublin, by Bryan Robinson, and although there is no mention made either of their Names, or the Person by whom they were inoculated, yet I chuse to insert two of them, lest I should be accused by the Opposers of Inoculation, of Partiality, in concealing any Thing that tends to the Disadvantage of this Practice, two out of these five being sufpected to have died of Inoculation.

The CASES of the nine Perfons suspected to have died of Inoculation, in the Words of those Gentlemen, that either inoculated them, or attended them in their Illness.

"I. New England, August 30. 1721.
"She was a fat Gentlewoman, of a tender Constitution; she came fright—"ned into the Practice, as most of the others had done, not only by living near the infected, but passing fome Days before by a Door wherein lay a Corpse ready for the Grave, which died of the constuent Small—"Pox, the Stench whereof greatly of-

" fended and furprized her with Fear of being infected. However, she went " the usual time of nine Days before 66 the Eruption, and broke out full of " a distinct sort, but being of a very " moist Habit, they fluxed in her Face about the seventh Day. She had a fore Throat, was often restless, and " by turns had a difficulty of breath-" ing, her Fever and Thirst being yet " moderate. The eleventh her Pox " began to turn, her Face became " crusty, and the fourteenth her Scabs " began to fall off, and she appeared " more comfortable; her Incisions grew " wider and run plentifully. All this " while we were in good hopes of her " doing well. This Afternoon her " two Children were brought to her " just recovered in the natural Way, " which gave her great Joy, but put " her Spirits into too great a Motion, " and the Weather changing cool (I " apprehend) she took some cold, for "that Evening she was taken with " Hysterick Fits, which held her a-" bout two Hours; but upon the Use " of an Anodine, and fome Anti-hyste-" rics, she became quiet, rested some " House F_2

"Hours that Night, and seem'd re"freshed in the Morning, and held it
"good Part of the Day; but the E"vening returning brought on her Fits,
"together with a new Fever, upon
"which I bled her, and repeated her
"Blisters, and used many other Means,
but to no effect. The Fits and Fever
followed her Close until the seventeenth from Eruption, and twenty
fixth from Inoculation, when she
died." Dr. Zabdiel Boylston's Historical Account of the Small-Pox inoculated in New England. London, 1726, 4°,
pag. 10.

"II. "John White Esq; aged sifty "two, was inoculated November 21, "1721. He was then a weak infirm "Man, and had been so near thirty "Years, some time consumptive and very splenetic. Thus knowing his unhappy Constitution, I persuaded him to remove surther into the Country try to avoid the Insection. He, tired with a Country-Life salready, and not knowing when Boston would be freed from the Small-Pox, though very cautious and timotous, yet would "be

" be inoculated. The Small-Pox came " out on the ninth, as usual, of the " distinct fort, the Symptoms easy. "They continued coming out the " tenth and eleventh, at which time " he was pretty full, of a very distinct " fort, and the Symptoms easy, except " that he was splenetick and dull, which " he was from the fixth, when he first " complained; the twelfth and thir-" teenth the Pock came forward, though " flowly, and of but an indifferent "Complexion. Now his fplenetick " Darknesses increased, and whereas " the first Days he took but little " Nourishment, now he would take " none by his Good-will, and refused " to be spoke to, or comforted, not-" withstanding he had no Complaints, " either of Pain or Sickness, Heat or " Oppression at his Breast. Thus he " lay languishing and withering away " like a Plant without Moisture (the " Pock not ripe, and of a livid Co-" lour) until the twelfth of Eruption, " and twenty first from Inoculation, " when he died." Dr. Boylston, page 23. of his Historical Account, &cc.

III. " An Indian Girl, about seven-" teen Years old, was inoculated at " Boston, November 29. 1721. She was " put into the same Room with eight " others inoculated at the same time. cc She was taken ill the seventh with " a gentle Fever, which continued to " the ninth, when the Small-Pox came " out upon her, of a kind and distinct " fort, she having about twenty in her " Face, so that she was easy and laughed, " as I found her half naked, fitting up " in the Bed. The tenth I visited the " Family late in the Evening, and the " Nurse said the Indian was very dull, " and did not care to speak. I found " her very ill, the Pock funk in, her " Pulse too frequent and uneven. " ordered her out of her cold Room " near a Fire, and many Means were " used to get the Pock out again, but " to no purpose, for she died before " Morning. She was a weakly Girl, " fubject to Humours breaking out up-" on her, Years before." Dr. Boyl-" ston, pag. 30. of bis Account:

IV. " Mrs. Bethiah Scarborough, aged " twenty two, was inoculated with " twelve others, December 1. 1721. " She had her Illness begun the seventh "Day, with a gentle Fever, and so " continued to the ninth, when her "Fever encreased, and she complained " of her Head, Back, &c. as is usual, " and no more. No Pox yet appear-"ing, she had. Blisters ordered her, " and other Means prescribed to bring " out the Pox, and that she should " be kept warm in Bed; and so I " left her that Night. The next Night "I found her (unexpectedly in her " Clothes) upon her Bed, faint and " weak, with a faultering, weak, and " dangerous Pulse; and her Nurse told " me her Courses were upon her, and " that she could not keep her in Bed. " I did the best I could for her, (be-" ing late at Night, and no Shop at " hand) but to no effect; she died be-" fore Morning. She had been seve-" ral Years, as her Mother and others " told me, a very fickly young Wo-"man, and never well. In short, " through my great Hurry, she was but poorly " fo she died, before the Pox came out." Dr. Boylston, page 31. of his Account, &c.

V. " Mr. Edmond Wells's Wife, aged " fifty four, was inoculated at Roxbury, " December 2. 1721. She was a very " weakly Gentlewoman, always com-" plaining, and of a very ill Habit of " Body, and so very splenetick, as often " to be deprived of Reason, and for " many Years not capable of managing " her Family Affairs. She had the Small-Pox at the usual time, and " of a very distinct fort, and the Sympc toms continued moderate for the first " five Days, fave that the cold Wea-" ther pinched her very much. The " fixth, feventh, and eighth Days she " was more uneasy, slept but little, " grew faint and weaker, the cold " Weather affecting her still more, and " the native Heat declining apace. The " Pock not filling, she sunk under it, " and died the ninth from Eruption, " and the seventeenth from her Inci-" fions." Dr. Boylston, page 33. of bis Account, &c.

VI. « Mr.

VI. " Mr. Philip Serle's Wife, aged 45 fixty three, was inoculated at the same " time with Mrs. Wells. She was likeer wife an ailing old Woman, hysterical, " splenetic, and of an ill Habit of Bo-" dy. She had the Small-Pox at the " usual time, and of a very distinct of fort; the Symptoms were moderate, " though the was often complaining " of one Uneafiness or other, as is " common in the Small-Pox; and the « cold Weather likewise affected her wery much. Thus she continued, " till the Pock fill'd and turn'd, and " the Scabs cast off; one Day a little 66 better, and another worse; sometimes " up, and other times in Bed. The " Perspiration being stopped by the " cold Weather, and a Complication of "Humours being put in Motion, " at last fell upon her Bowels. She " had a purging three or four Days, "which carried her off. She died " the twenty fourth from Eruption, " and thirty third from Inoculation." Dr. Boylston, pag. 33, 34. of bis Account, &c.

VII. " Pearcy Oliver, aged fourteen Months, was inoculated at Dublin 66 by Mr. Hannibal Hall, March 15. " 172%. He was a very fickly and in-" firm Child from the Birth, had a "Weakness and Relaxation in all his 6 Joints, being very ricketty, had not c a Tooth at fourteen Months; he " had no Use of his Limbs, the Mould of his Head very much open, and " the Sutures at a confiderable distance " from each other, infomuch that there " was a confiderable Portion of the Ce-" rebrum contained within the Pia and " Dura Mater, to the Bigness of a " Walnut, which appeared in the open-" ing of the Mould elevated above and " without the Sutures. This Accident " was not known to the Physician, " nor to me, till some time after he " had been inoculated; he was a very " unfit Subject for the Operation: how-" ever, the Parents having loft feveral' " Children in the Small-Pox in the na-" tural Way, and his Brother, tho' a " weak Child, having undergone the " Operation with good Success, en-" couraged the Parents to have this " Child

a inoculated, which he underwent the « Day abovementioned by making an « Issue in his right Thigh, he having « an Issue in his Left Arm made some " Months before; the Pledgets moistned " in the Matter were removed at the " usual time, when I observed an In-" flammation round the Islue, which " encreased daily with a very fetid Sa-_e nies from the Issue, which was much " enlarged by the Sharpness of the " Humour, both in Depth and Breadth, " with a foul Slough in the Bottom. "The feventh Day the Fever began, " and he became restless; the eighth " the Fever grew higher, and in the E-" vening the Small-Pox appeared in his " Face and Arms; the ninth they came " out in great Numbers on his Arms " and Thighs, the Fever went off, " the Issue in his Thigh runs plen-" tifully, and the Matter of a better " Consistence, the Slough in the Bot-" tom separates, the Issue formerly " made in his Arm runs very much; " the tenth Day the Pustules fill and " are very distinct, but of the smal-" ler-fort; the twelfth the Small-Pox " dry on his Face; the thirteenth Day ee jac G_2

" he is feized with a Loofeness, which " by the Care of his Physician Dr. " Mitchell was stopt; the fourteenth "I observed a small Tumour in the "Inside of the Thigh in which the "Iffue was made; the Tumour was " nigh to the Groin, it increased with " Inflammation, Anodines and Emol-" lients were used, and in a few Days " the Tumour tended to Suppuration, " which was promoted by suppurative " Cataplasms; when suppurated, I laid " it open, and discharged a large Quanti-" ty of well digested Matter, and in a few " Days the Sore heal'd. He was several " Times purged with Syrrup of Rhu-" barb, and some Grains of the Pow-" der; he was subject by Times to a " Looseness; he continued well, but " weak, for some considerable Time " after the Small-Pox were over. Af-" terwards he was seized with a Hea-" viness or Weight in his Head and " Neck, which he had been subject to; " his Physician prescribed such Medi-" cines as he thought proper in his " Case; he was afterwards seiz'd with " a Foaming at his Mouth, and a concc vullive "vullive Fit which carried him off:
"To which Fits he had formerly been
"fubject." Thus far Mr. Hannibal
Hall.

To this Account were subjoin'd the following Certificates.

"We do hereby certify, that Pearcy " Oliver was from his Birth to his " Death a very weak Child, and had a "Heaviness in his Neck, so as his " Head lay back for the most Part; " unless when supported; he was fre-" quently subject to a Looseness, with a " very great Weakness in all his Joints, " infomuch that at the age of fixteen "Months he could not set his Feet " to the Ground fo as to bear the "Weight of his Body; he had not " one of his Teeth cut at his Death. " The more than usual Weight and " Heaviness of his Head seized him " the fifteenth Day of April, which " continued 'till the seventeenth Day " of the same Month, when he foam'd " at the Mouth, with a small con-" yulfive Fit, of which he died, be" ing the thirty third Day from his being inoculated.

Dublin, February 27th. 172[‡]. Tho. Tilson. Eliz. Tilson.

" I do hereby certify, that I ata tended Pearcy Oliver in the Station " of a Dry-Nurse for several Months " before he was inoculated, and after-" wards 'till his Death, and during the " whole Time of my waiting upon " him, which was constant from my " first coming to him, I found him " to be a very weak and fickly Child, " with a great Weight and Heaviness " in his Head and Weakness in his " Neck, infomuch that his Head lay " always back betwixt his Shoulders " unless supported; all his Joints were " loofe and weak, as not to be able to " bear the Weight of his Body; he " was a Child of no manner of Action as others of his Months; he had a "voracious Stomach, though he did " not thrive, or get Flesh by his Nou-" rishment; he was often seized with a " Looseness, but it did not continue a-" bove "bove a Day at one time; two Days before his Death, the Heaviness or Weight in his Head encreased more than usual, as not to suffer his Head to be kept up, and at last was seized with a Foaming at his Mouth with a convulsive Fit, which carried him off.

Dublin, February

Sara Warner.

VIII. " The eldest Son of a Gentle-" man at Dublin, aged thirteen Years, " was inoculated in Dublin, August " 26, 1725. He was nursed in the " Country, where he continued 'till he " was a Year and a half old, and was " then brought home to his Parents in " a very poor and weak Condition. " Soon after he grew ricketty, but re-" cover'd from that Disease in less than " a Year. In some Months after his " Recovery, he got a Swelling in his " Foot, which suppurated, broke, and " ran for feveral Weeks. After this " was heal'd, he continued well for " about three Years, then he had an " Abscess in his Belly below the Navel, " which

which suppurated, broke and was healed in about two Months. Since that Time he enjoy'd a very good State of Health, and was a strong lusty Boy when he was inoculated.

" On the eighth Day after Inocula-" tion, he began to be disordered with " a Head-ach and Vomiting. His Vo-" miting was frequent and violent 'till " the third Day of his Illness, and then " it abated, but did not cease, for he " vomited at times 'till the fourth "Day at Noon. No Pock appeared, " but on the third at Night purple " Spots of different Sizes were observ'd " all over his Body, many of which " were as large in Diameter as a mid-" ling Pea. About this time he faint-" ed, and died in the Evening of the " fourth Day, about twenty four Hours " after the first Appearance of the Spots. " He was extremely thirsty during his "Illness, and for the most part pale « and cold.

" His Incision had a good Digesti" on at the second Dressing, which was
" on the third Day after it was made,
" and

and continued in this State 'till the Day on which he fickened; then it grew pale, flaccid, and had little or no Discharge. It continued thus 'till the third Day of his Sickness; then it turned blackish, and was perfecting by dry on the fourth, the Day on which he died.

IX. " The third Son of the same "Gentleman, aged about ten Years, " was inoculated at the same time with " his Brother. He was a fresh co-" lour'd, strong, healthy Boy, who ne-" ver had any Sickness, began to be " disorder'd on the eighth Day after Incoulation; in the Evening he com-" plained of a Pain in his Head and "Belly. He was very hot, thirsty and " reftless all that Night. The next Day, which was the second of his "Sickness, he vomited in the Morn-" ing, and continued vomiting at Times "till the third Day in the Evening. "Then the Eruption begar, and on " the fourth in the Morning it appear'd " in his Face like an Eryfipelas. " could not at that Time discover any "Pustules either on his Body or Limbs,

" but he had many purple Spots all over "him, especially in his Neck and " Loins, many of which were as large " in Diameter as a great Pin's Head. "On the fifth the Pock began to ap-" pear in his Body and Limbs, " came out thick on the fixth. " was extremely reftlefs, and raved " much from the beginning of the E-" ruption to the fixth Day, but was " pretty quiet that Night, slept, and " began to spit. On the seventh his " Face was swell'd, his Spitting conti-" nued, and he had some Sleep. " the eighth he continued much in the " fame State, only drank and flept more " than he had done before. On the " ninth in the Morning the Swelling of " his Face abated. On the eleventh his " Breath grew short, his Spitting stopt, " and he died in the Evening. His " Pock was the worst Sort of the con-" fluent Kind, it never fill'd nor digest-" ed; but continued flat and watery 'till " his Death. He had no Thirst, and " would drink but little during his " Illness.

"His Incision discharged a well digested Matter from the third Day
after Inoculation 'till the Day on
which he sicken'd: Then it grew pale,
flaccid, and had little or no Discharge.
It continued thus to the eighth Day
of his Sickness, then it turn'd black
and was scarified: On the ninth it
discharged a little thin Sanies: It grew
quite dry on the tenth, the Day before he died."

In Germany.

At Hanover.

By Mr. Charles Maitland, in 1714 9
By Mr. Wreden, Surgeon 1

At Pyrmont.

By Mr. Wreden, under the Direction of John Philip Seipp, M. D.

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Total 329

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A Table containing the several Ages of the Persons inoculated in foreign Parts, with the Success of the Operation.

Age.	Perfons In- oculated.	Had the Small Pox by Inocu- lation.	Had an im- perfett Small- Pox	No Efect.	Sufpected to have died of Inoculation.
Under 2 Years	12	¥ 2	o	o	
12-1	27	27	٥	o	. 0
₹*		8 1	o	o	ī
5 to 10	25	25			
to to is	35	35	0	0	E
15 to 20	53	35 52	۵ ·	ı	I
zo and up-					
wards to					
near 70	130	123	0	7	5
Age unknown.	47	47	0	0	0
	Constallation		(533380-000		
Total	329	321		1.8	9

dren inoculated, he carries them to one that lies ill of the Small-Pox, at the Time when the Pustules are come to full Maturity. Then the Surgeon makes an Incision upon the Back of the Hand, between the Thumb and Fore-finger, and puts a little of the Matter, squeez'd out of one of the largest and fullest Pustules, into the Wound. This done, the Child's Hand is wrapp'd up with a Handkerchief to keep it from the Air, and he is left to his Liberty 'till the Fever arising confines him to his Bed, which commonly happens at the End of three or four Days. After that, by God's Permission, a few Pustules of the Small-Pox break out upon the Child. All this I can confirm by a domestick Proof: For my Father carried us, five Brothers and three Sisters, to the House of a Girl that lay ill of the Small-Pox, and had us all inoculated the same Day. Now he that had most of us all, had not above twenty Pustules, Otherwise this Practice is so innocent, and so sure, that out of a hundred Persons inoculated not two die; whereas on the contrary, out of an hundred Persons, that are infected with the Small-Pox Pox the natural Way, there die commonly about thirty. It is withal so antient in the Kingdoms of Tripoli, Tunis and Algier, that no body remembers its first rise: and it is generally practised not only by the Inhabitants of the Towns, but also by the wild Arabs.

FINIS.

ERRATUM.

Page 28. in the Note, dele (Vid. App. Nº 1.4

A Paper relating to the Inoculation of the Small-Pox, as it is practifed in the Kingdoms of Tripoli, Tunis, and Algier. Written in Arabick, by his Excellency Cassem Aga, Ambassador from Tripoli, and F. R. S. Done into English from the French of Mr. Dadichi, his Majesty's Interpreter for the Eastern Languages.

Y Opinion being asked relating to the Inoculation of the Small-Pox, I will mention in a few Words what I know of it. If any one hath a Mind to have his Children