

8 6 '(3\$570(17 2) +(\$/1' +80\$1 6(59,&(6

:LWQHVVHV DSSHDULQJ EHIRUH WKH
6HQDWH \$SISU&S&RPLWWHH

.QWURGXFWLRQ

&KDLUPDQ %OXQW 05DQNDLQJQHBEHWLQJXLVKHG PHPEH
,W LV DQ KREHWRUJSBX WRGD\ WR GLVFXVV WKH 'HSDUW

YDFFLQHV WKHUDSHXWLFV DQG GLDJQRVWLFV FROOHFWL
SDUWQHUVKLS DPRQJ6FRQSBQWJ8RQG)%\$\$51\$+ DQG WKH
'HSDUWPHQW RI 'HLMQWKHRDL PZRI DQXQDSLGRDRKHWQPUHVS
WKH SDQGHPLF 2:6 HQJDJHV ZLWKDSHQYFLWH ILQPOXGQJRW
'HSDUWPHQW RI \$JULFXOWXUH WKSDBSVPWHQPHRW9RW(HJDUQ
2:6 FRRUGLQDWHV ZZWGHHHVULQV #H\$V\$XGHQJWKWLQJ & 29
7KHUDSHXWLF ,QDFFULQHQW\$BQ,9 DSDUWQHUVKLS 1,+TV 5D
'LDJQRVWLFV 5\$'[LQLWLDWLYH DQDQZ,QUNVEW%\$5' \$RDQGOV
,QIHFWRXV 'LVHVVHV 1,\$,'

7R DFFHOHUDWH GHYHORSHPHQW ZKLDQGPHDILQWDFLQ2GJ V
KDV EHHQ VHOHFWLQQJWRKXDRWHVSHDQXSHFYLQGLQDPRRUGL
JRYHUQPHQW VXSSRUW 3URWRFRQG IRIULWDFH\GHUPRQVWQJDI
ZKLFK ZLOO DOORZ WKH WULDORWRRRSBBFHIRG PRUHHWUXILFQ
RYHUVHHQ E\ WKH IHGHUDO JRYHUEEHR\$UDYDRSSSDH@QWR
ZKLFK SKDUPDFHXWLFDO FRPSDQLHDWGHFULGWHKROHCKLPLLODZ
IURP WUDGLWLRQDPRGHGHORSVWH\$W ZLOO SURFHGG VLPXOW
PDQXIDFWXULQJ RI WKH YDFFLQHGHWRQGXWWDWLDQQRDOHDF
HIILDFD\ DQG VDIHWDODV KSS\$HGFQRDWHV WKH ILQDQFLDO
ULVN

:H ZLOO EH ZRUNLQWRQV\$DQGLQWDFRQVWDQW VW
VFLHQWLWV 2RPSOMKHGD\$ZMDUHSRDRVW WKH\ QHHG W
VDIHW\ DQG HIILDFD\ DV TXLFNO\ DLW\$RUHLXEDHWKHZR\$XLI
VWDQGDUG PDQQHU DQG E\ NHHSLQWVKH\FDQQSHVRGIXFRPRQ
JXLGDQFH WR VX\$LDOW WRKHFKHLDLFDQGRGWRQGR IRU DJ
SULRULWLHV

7R SXW LW UHDOO\ VLP\$O\ GUXJRGXKDRSFRQFWHLFNBYM
FRPSOLFDWHG ER[HV EXW ER[HV QRQ\$WKHGHQWGRYXHSRPS
SKDVHV \RX QHHG FHUWLILFDWLRQ RI \RXU PDQXIDFWXULQ
PDQXIDFWXULQJ DQG WULHQWRKQEHFLQJHTMDFKVDQGHYHU

WKR VH ER[HV MXVW OLNH ZH ZRXOG IRU DQ\ RWKHU SURMH
OLVW :H[UH DLPLQJ RW RW ER RW MDQ HREXDO\ DV Z

7KH IROORZLQJ WHLOWLPRQWKZLO, G%SDS\$ DQG V&U& EXWLO
2:6 DQG RYHUDO\$HYDWE EQBQW KLUDDQRVWLF HIIRUWV

1DWLRQDO ,QVWLWXWHV RI +HDOWK

1,+ LV WKH ++6 DJHQFH VHHDFKQUHWKSRQVH WR &29,' D
FRURQDYLUXV WKHDWF DQ\$56V&RKH GLHVHDFK WR DGGUHV
KHDOWK HPHUJHQF\ LV DQ 1,+ ZLGH HIIRUW

1,+ LQ FROODERB&VGBQIZRQKRWKQDQKQFKHGHDGQWQRV
SXEOLF SULYDWHHSQUMKQHGMKHSRSPWHSWDRS&2V,LFV DQG YD
7KH \$&7,9 SXEOLF \$USYEDWLQSDWRQHWWKDFURWVQVHWRQGHUV
JRYHUQRUR9DP ` 0

WEYDWH SDU#•` 0ÄÄ XE d@% €E)

PRUWDOLW\ GDWDWLEGGORWJQHILFDQWDDWBLRRUWSDIUFHQW Z
IRU WKH JURXS UHFHLYLQJ UHPGHVLYLU YHUVXV SHUFH
SXEOLVKHG RQ 0D *New England Journal of Medicine* :RUNLQJ DV SDUW RI
\$&7,9 SDUWQHUVKLS 1,\$,' LV GHYHORS LLQJS XQSRWHGWWLKHUR
DGDSWLYH GHVLOQ RQDKOM WKHDOYDIOXDWLRQ RYHU WLPH
WKHUDSLHV VQFKDPPDWKRHUDCWKJLEDULFLWLQLE ZKLFK KD
LWHUDWLRQ RI WKH VWXG\ \$&77 FXUUHQWO\ XQGHUZD\

\$QRWKHU SURPLWLQJWKHKNCHDSHROVHO/ DROWL\$ERG L7KHUH D
FRPSDQLHV GHYHORBEQJ RSEWKDQKQKQYFOLQDEJDOH WIDDJOV
WKH \$&7,9 SDUWQHUVKLS DQG LQ FROODERUDWLRQ ZLWK F
VWXG\ WR HYDOXDWH P\$EV LQ RXW\$DWLHDDWV WZKWK PRQW
VHSDUDWH WULDO ZLOO HYDOXDWDRSCELVQLQ HSSDDW H QFOL
DVVHV K\SHULPP RQKQJQJUREYKQQRXDQIBHRSVE R II R&2 W'U HDL Q
KRVSLWDOLJHG DGXOWV

7KH 1DWLRQDO +HDUW /XQJ DQG %WRKRG CGLWLLRXWHI
VLWH IRU D &DQBGLDQDQWVEMXHBHMFROKQGFLGQ M²DLQDQWL
LQIODPPDWRU\ GUQJWFRFURHDOX XRXHW²IRUQWVWIKHVRXQJS DZVLHC
VHWWLQJ \$GGLWLRQDOO\ 1+/%, LVHOLHYV WDRJLQQRWKHW H, (PI
&DUH &OLQLFDO 7ULDQV RQVZROUHVWFRQWVSGRVEKHSKCHMP B IU
LQGLYLGXDOV ZKRURKDY&2U,HFRYFDUHQGHIOS UHGXFH WKH SURJ
LQ SDWLHQWV ZLWQWPKBGMDFUSVXRVXWJLQ1D/%QZQOQDO WULD
RI DQWLFRDJXODFQWVH KRSLOKWKWRDWWHQ LQJ EORRG FORWV V
SDWLHQWV

7KH 1DWLRQDO &HQWHUDQVW\$VYBQBDLQFQHQHFDJLQ\$76
1&\$76 3KDUPDFHXWLFDO &ROHFWLRQ DFRPSLODWLRQ RI
PDMRU UHJXODWQZLGHHDQGHVWZHUOFROHFWLRQV RI VPDC
WR LGHQWLI\ SRWHQWLDO 6\$56 &R9 WKHUDSHXWLFV IRU I
&HQWHUV DFURVV 1,+ DOVR DUH ZRQDLQDQGFHQBXDQGHQWGXV
SXUVXH WKH GHYHORSRHELVDDQWVHG DQWLWKURPERWLF
WUHDWPHQW RI &29,' 1,\$,' 1&, 1+,%W L&\$76HVRK\$UIDKWU

0XVFXORVNH0HWD0 DQG WNKHQ1LWHDVOR,QRJLEWØWHEVRUGH
6WURNH 1,1'6 DGHQDQXHQBDUWLFDO HIIRUW

1,+ DOVR KDV FRQYHQHG WKH &29,' 7UHDWPHQW *XLG
UHSUHVHQW DQGLYHLVRIRWKHU IHGHUDO DJHQFLHV DORQJ ZI
SURIHVVLQRQDO RUJDQLJDWLRQV DFDDQHPILQHQXIGLVV SDQGL
KLJK &29,' LQFLGHQFH DUHDV 2XHQ\$ULOHHDVUHVRIW&29,'SDQ

WUHDWPHQW JXELGHQDQXHQBDUWLFDOHIIRUWSDRVLRQV UHJD
VSHFLILF WUHDWPHQWVORFXDQHQDQGLVUHVVRQVLELGHQSDRVKODV
LQFOXGLQJ SUHJQDQW ZRPHQ DQG FKLOGUHQ 2Q 0D\
DQDO\VLV RI \$&77 WNKHQ1LWHDVOR,QRJLEWØWHEVRUGH
WKH WUHDWPHQW RWDZQLJHG LQDWHVHQDQGLVUHVVRQVLELGHQSDRVKODV

VHQVLWLYH VSHGLDJR RDVQL FUSLWML FDEQ 6\$56Y & B B Q J L F / R O D W
UHDJHQWV WR WKH GHYHORSUV RI WHVWV

7KH 5\$'[8QGHBRVSHXODHSLRQY LQLWLDWQYH VZKΘ QJΘ FR D
SRZHU RI WHFKQRORJLHV GHYHORSHG DQG HQKDQFHG WKU
LPSOHPHQWDWLRQ QID FENDRUUL HWKDORES WSHWLQLSR SDXOD WR Q Q V
WKH PRVW 2Q -XQH 1,+ DQQ RUXVQFHLGV LRX/UI RQH ZFRXQ
HQJDJHG SURMHFWV ZLWKLQ 5\$'[8BQ G KID FJR B D VRW KDKWVKDY
GLVSURSRUWLRQ SDVGHXULG HQ RIXVQMHUB EVOKHDSR SQ V B W Y R Q W
LPSOHPHQWHG WR GHFUHDVH WKHVH GLVSDULWLHV

7KH 1DWLRQDO &DQFHU ,QVWLWXWHWR BRRHGLQDKHLQJ
VHQVLWLYLW\ DQGLSDH\$56F&R9 R M F H B O R J L F D O W H V W V Z K
LQGLFDWLYH RI WRS6\$B6 &R9RVXI&H B QDGH, \$,R DNQLQJ WR HVW
FRODERUDWLYHRQIDQFLRQDQ QHDWZLRQKOT K D S D F L W H I U R R O R J L
ZLWK UHWXUQ RI UHVXOWV WR VXFEMHFWN D Q K D Q G L M Q L R Q H D V
XQGHUVWDQGLQJ B Q G H D S B O X E D W L R Q G F Y O W S L F D O H H I B D W V L
FOLQLFDO WULDOV B Q G R Q K H D G H W D U N Q H V Q R R U X P W M G V X E M H F
SURWHFWLRQ VWXGLHV

1,\$,' 1&, 1&\$76 D Q G R I , D U % S D U W Q H U L R J L B Q H D V Q H J D W M
ZKHWKHU DGXOWV LQ WKH 8QLWHG 6WD

LUQO C 9cqa5%Ð € V

FROOHFW GDWD RG WSHFSMLNPD R HIFDOPV \REVVHUYHG LQ SDV
6\$56 &R9 LQIHFWLRQ *Eunit+Kerney, Skier* MDM LRQDO , QVWLWXWH
+HDOWK DQG +XPDQO'HYGORS DHQWDDVH1 , + HIIRU, \$, ' ZLWK SD
WR FRRUGLQDWH UHVHDQFDIPQV W RWK HV PQGWL V\ VWHP



DYRLG GLVSDULWLHV LQ DFFHVV FORLQHWGRYDLQJFLQXISHOASHWU
WKDQ RQH GRVH LV QHHGHG DQG DVS/RUW DQJWY & FULVQLDFDOR
WKH QDWLRQ¶V LPPXQLJDWLRQ SURJUDP VDIHW\ HIIHFWL
FRQILGHQFH LQ WKH QDWLRQ SURJUDP DQG SROLFLHV

&29,' LV QRW WKURDQ\LIQH DOWRLVGVW 7KH LG
VHDVRQ LV IDVW DSSURDFKLQJ & RWLQR D SULW DORJ DWLRLQ X
DPRQJ RWKHUZLVH KH DQW D WFK LQGHYH D L W VR D Q S DURLXW L Q H
YDFFLQDWLRQ KDYH DOVR GHFOLQH D Y V Q E V F K D Q W U B Q O D Q G R
DW ULVN IRU SUHRYHQW D E O N H V G I S H U D Y J D W L R Y H R I H F U Y U I F H V K D
GLVUXSWHG E\ &29,' HQV XQ HR W G H H U X W P M G L F R D V S I E W D D D Q S D F L W
ZRUN DJJUHVVLYH O X H Q J D L Q D G H D W K R H G U I R P X V I Q Q H J D F K L L R O G V) X
ZH FRWLQXH WR ILJKW WKHS & D Q G W R D W K D F V R \$ I L G U L Q F D H L Q I
YDFFLQHV &' & Z L O P P D G Y J H U D L J H Q L S U J Q W D E Q W R L J K H G & Y F D U D J H
FKLOGKRRG LPPXQLJDWLRQ J W R R R Q D X D Q G F S U G S W U H I R U D
&29,' YDFFLQH

CDC's Immunization Program

9DFFLQHV DUH RQHJRH SW E I O W F D F K L O W K P W I Q W V , Q Y H V W
LPPXQLJDWLRQ SURJUDP K D Y H D Q W S U R M L S P P X Q L J D W L R Q K R I F K L
WKH 8QLWHG 6WDWH V I K Y H V V F R I O Q B I H D O W B I G W R S D F W D Q F \ U
KHDOWK GLVSDULWLVH VR ILQSIUR Y H G G T X D R I O G D W U L Q Q L R R F L H W D
, P P X Q L J D W L R Q V K D W L H Q B H S F R P M B I U K R Z Z H F D U H I R U R X U F K L
FKLOGKRRG YDFFLQDWLRQV DUH DW QHDU RU DERYH SH
SUHYHQWDEOH GLVHDVHV KDYH GHFOLQH D W B I G / H E V Z L S H K U W I K Q W
LQWURGXFWRQ RI YDFFLQHV \$ G X W K R X Q D I G G V Y D I F D I G Q I O W W R
EHFRPH VHULRXV S L W D O L D Q G E D L F H K W N Y R I F G L Q H D V H D Q W K H O S
&' & ¶ V L P P X Q L J D W L R Q SURJUDP S O D \ W O D M X I Q G O P O Q W P X Q Q U F O V
JRDOV DQG VXVWDLQLQJ KLJK YDFGHQDWLRQGFQYVH D E L J O I L W D
VLJQDWXUH SLHFHV RI WKLV SURJUDP D Q F O X G W L W I O H D B E R F L
DQG &' & ¶ V G L V F W L R Q L R Q D P R X Q E J D W L R Q 3 U R J U D P

LQFUHDVLQJ FRPPWQLBFWLRQ SIDURQWSDUSORMLGRUWIDH LP
URXWLQH YDFFLQDWLRQV GXULQJ WKRX&ZD'DFKSDGSHPRYLD
LQIRUPDWLRQ DERXW WKH 9)& SURZKBPVWKIDPHOLHFFHQWVS
LQVXUDQFH FRYHRUZRHUN&QJ IZLVDO SIDUWCEBFW WR NQRRO Y
DFWLYLWLHV GXULQJ WKH VXPPHDODQG&RQMLXQHQJGFBREUQL
EHWZHHQ KHDOW&GFSEOSURKHLGOWK BILFHEDWDOV OVKYH OVR
EH QHHGHGWRBH DQG PDLQWDLQ URXWYLGHVS&UDWJWFKMDSF

\$QRWKHU DFWLWRWHIWHFDWLYN GIMWRIL&ZD,LRQYDFGLQSHW
HQVXULQJ SHRSOH KDYH DFFXUDWXLWQHWRWDOJLWQKWRDPDFNLK

Preparing for COVID-19 Vaccines

&'& LV ZRUNLQJ FORWHHODJZLQFK WMDISLWPKGRWZHDUPGQRHQ FULV
UHODWHG WR D &29,JUDFDWFKURKJ& 2HDG&'&WRWDOHGLWU H[SH
SXEOLF KHDOWK SUHSDUHGHVVDWIGRQHVCIRUOWWIDORWQUZL
2:6 LQ YDFFLQH SURPRWLRQ GLVWULEXWLRQ DGPLQLVWUD
LQYHVWPHQWV WKURXJK WKH &RURIQDXULWV\$FLG KDPHIDOD
WR SURYLGH LWZDURPHQLJDWBRQOLRQ LQ VXSSOHPHQWDO I
HQKDQFH WKHLU LPPXQLJDWLRQ SURJUDQFHG7KRVVXS\$RMPH
DZDUGHH DQG ORPHDQWVWDMWKQGHSRSDWJQLVDSVLRQWPEB
SUHSDUHGHVVDWIGRQPDQVDEGEMLRQ WR RWKHU &29,' À PV

7KHUH DUH PDQ\ FVLWR FDRQ 7 B 8 8 QHQMD SSCHPGHQLB WLR
YDFFLQH 0DQ\ RZLWQH H GHFWRUPV LQHLGWE\DW BHF 8 8 D D 8 W HUL
OLFHQVHG YDFFLQHV DQG WKH SULRU



GHWHFW DQG WUGHZLWVWKRUVNXLSDHURVGI RI KDYLQJ & 2

Vaccine Development Efforts

6LQFH ODWH -DQXDU\ %\$5'\$ KDV FRRORERKUDWRIGHZIQPK
LGHQWLI\ SRWHQWEDDORZQWHBFBVDXUH FDQGLGDWHV DQ
GHYHORSFHQW %\$5\$FRU/GDRWVDFHVV LQ GHOLYHULQJ HI
UHVSRQVH WR SXEOLHFVKBDVWVXIRFHUWVHQV LQEQXGHQJ
SDQGHPLF (ERQD RXWELLQDNHW \$IULFD DQG LQ WKH 'H
WKH &RQJR DV ZHXODEDMWKHQ=LND)RU WKHVH SDVW UHVS
FXUUHQW UHVSRQVHHWR &D9, 'SUR&RQH HPHUJHQF\ VXSSOH
VXSSRUW WKH XUJHQW QHHG IRU PHGLFDO FRXQWHUPHDVX

\$W WKH RQVHW RI 'SKHSDIQZHG ILQY%\$5\$ PFRQWU DFRGLI D
EHJDQ ZRUNLQJ ZLWKQ5HDGQHDQRILWDDWHHWKWBHLQHORSPI
YDFFLQHV DQG WKHUDSHXWLFV IRXQ&Q9, GHYHORSWUUEHRWKD
SURSK\ODFWLF DQG %D0p€€pÀ` P up€ Lrp0 €pÀ€` 0@pÄ P1 W

,W LV LPSRUWD QW HW R VQLW W OX KDGR Z HQ Q J OQ D Q TX LRJ H C
UHJXODWRU\ DQG W DJHTXKL U H GX LRUPPH QW L QH DGHY Q B W SV D F UL
VDIHW\ RI WKH YDFFLQH LQ RUG HDU W RL Q V SH Q LGW M XLS B R U G M LY Q
WKH VDPH WLPH , QH DGHG LHV LR SQ HWRW W Z F J D Q H Q X X S S W X UL Q J H
HQVXUH ZH DUH RGRX FLW DR Q G H G D W R E S B W X R N O A W B S Z G H F F H Q W PL Y H
6SHFLIZHD D O H P D N F L Q Q W L Q Y Q V W K H Q H F H V V D U \ P D Q X I D F W X U L
JLYLQJ FRPSDQLHWK R H Q I E G G L Q H Y H Q K D W D Y H O R S P L H Q H O D Q G D O
IDVWHU PDQXIDF W X O U G Q V W D Q L E X R M D Q F L Q D Q H D Y H Q W X W X U L Q J
IRU VHOHFWHG FDQGLGDWHV EHLQJ D D G Y D W L F H G L Z K G O H Y H O R S
WKDQ VFDHGH XSD X W K R U D \$ S W B R Q O 7 R H O D \ \$ S U L O D Q
DJUHHPHQWV ZLW R G S H U Q D D = H Q G H F D Q Q V H Q - R K Q V R Q - R K Q V R
SURGXFW GHYHORS PHQW DQG LQYHJV M P S H Q W O L L V Q L G D U J H K V H F

%LRVHUYLFHV , QFLOERKXG GIDOVHFKDUS\, VZR XCHS WKH &RP
XSGDWHG RQ WKH SURJUHVV RI XWILQVWLV&V\$D FHDV ZH PR

6LQFH LWV HVWDEOLSKDMSWR YHQ VLXSSRUXWEEV VS DQW
SXEOLF KHDOWK DQG PHGLFDO HPHUXBQRUMHG: KXW KHEDWK
IORRGV LQIOXHQJDURKQIEHFM LNRX V DQGLVPROGHHV LFX, KXOXHQJD
(EROD =LND R29WKH SFXQGHILQV &ZHVKKH YH XWKLQULMG HV DQC
UHVRXUFHV SURYLGHMVEV XSPQRJUMHWSR V QLEW LVR R WQ HUKUHD
PLWLJDWLQJ WKH ODVWLQJ LP SDFKHG %RSYH\$ KDVLQ &KFWUMIX
SDUWQHUVKLSV DQSSRURW DQVHGRU PHQD K D DVFR)XQWKHB
%\$5'\$ KZRUNHG ZLWLV LWRV SBYHQRSHUFRKXVR JSLOVWWRKDFW WDF
UDSLG GHYHORSPHQW DQG PDQXIDFLVQ WIKQJIBF # HRG LF DQZC
HPHUJLQJ WKUHDW

7KDQN \RX DJDLQ IRU \RXU VXSSRUW DERXURSDUMLQVWR
DFFRPSOLVKPHQWGH, DVP WKDW ZH FDLQ WXULLENKVMHGDIYDORSDQ
YDFFLQH WR UHFQXRH &2KH' LP S/R RXU QDWLRQ

&RQFOXVLRQ

++6 DSSUHFLDWHV LQKHUVXSSRUW & DQGHVV LQ RXU ZRUN
:DUS 6SHHG DQG WKH GHYHORSPHQW JRIRYDVLFFLVQ H&R QWK GHD
SRWHQWLDO KHDOWK VRFLDO DQDQGRHQRHPFLW LEYHQYDIFW VQR
SODFLQJ ELJ ILQDQFLDO EHWV RQ WKHVH YDFFLQHV LV D I
DQDO\VLV SXW WKH FWDVWRIRKDPWVRQZHEGODLVRQ DERGD\2WR
QRWKLQJ RI WKHQQLYRHWWWKBDWDIDHVEHQ SDRHUZHLWVKWRZDUG
:HJUH SXWWLQJ ELOOLRQV RI GRUODDQVFRQ GARKHODUQFK DQROV

:H ORRN IRUZDUG WRSDJWHQWUDQG ZIRWNLQJ WRJHWKHU
FRQLQXHV WR RSHQ VDIHO\ DJDLQ 7KDQN \RX IRU WKH R
IRUZDUG WR \RXU TXHVWLRQV