

# 5IF \$VSSFOU "XBSFOFTT BOE ,OPXMEHF PG U \$BSEJPWBTDVMBS )FBMUI

7LQD 5DPLQHL DQG & 1RHO %DLUH\ 0HUJ

%DUEUD 6WUHLVDQG :RPHQV +H DUW &HQWHU &HGDUV 6LQDL +H DUW ,QVWLWXWH /RV \$QJHOHV 86\$  
&RUUHVSROGLQ\$ D\$WKLROHUJ0' )\$&& )\$+\$ 'LUHFWRU %DUEUD 6WUHLVDQGURP+LQDL +H DUW ,QVWLWXWH  
%OYG \$+63 /RV \$QJHOHV &\$ 86\$ 7HO PH)D]#FVKV RUJ( PDLO

5HFHLYHG6B\$WHPEHU \$FFHSWHG6B\$WHPEHU 3XEOLVKHG6B\$WHPEHU

&RS\ULJKW 5DPLQHL 7 HW DO 7KLV LV DQ RSHQ DFFHVV DUWL 0 0 H•KDYH VKRZQ GHFOLQLQJ PRUW  
LQLWLDWLYHV DQG FDPDLJQV WR UDLVH DZDUHQHV RI &9' ZLWKLQ  
FRPPXQLW\ ZRPHQ DQG SK\VLFLDQV > @ 6XEVHF(YLGHQFH %DVREVVHWULFLDQ J\QHFROJLVW  
ZRPHQ 2SSRUWXQLWLHV VXFK DV GH VWLJPDWLJDWLRQ PD\ FRQWULEXWH WR  
LQFUHDVLRQJ QDWLRQDO DZDUHQHV RI WKH UROH RI &9' SDUWLFXODUO\ LQ  
\RXQJHU DQG HWKQLF PLQRULW\ ZRPHQ DQG HQFRXUDJLQJ WKH XVH RI  
HYLGHQFH EDVHG SUHYHQWDWLYH JXLGHOLQHV ZKHQ WUHDWLQJ IHPDOH SDWLHQWV

)XQGLQJ

LVZRUN ZDV VXSSRUWHG E\ FRQWUDFWV IURP WKH 1DWLRQDO +H DUW  
/XQJ DQG %ORRG ,QVWLWXWH QRV 1 +9 1 +9 1  
+9 1 +9 JUDQWV 8 8 +/ 8  
+/ . +/ 7 +/ 5 +/  
5 \$\* IURP WKH 1DWLRQDO ,QVWLWXWH RQ \$JLQJ \*&5& JUDQW  
02 55 IURP WKH 1DWLRQDO &HQWHU IRU 5HVHDFK 5HVRXUFHV WKH  
1DWLRQDO &HQWHU IRU \$GYDQLQJ 7UDQVODWLRQDO 6FLHQFHV \*UDQW  
8/ 75 DQG 8/ 75 DQG JUDQWV IURP WKH \*XVWDYXV DQG  
/RXVHLV5HVHDFK )RXQGDWHRPHQDQYL'XQDG 1-  
RI &HGDUV 6LQDL 0HGLFDO &HQWHU /RV \$QJHOHV &\$  
\$LG 6RFLHW\ RI :HVWHUQ 3HQV\OYDQLD 3LWVWVEXUJK 3\$ DQG 40(' ,QF  
/DXHQFH +DUERU 1- WKH (G\WKH / %URDG DQG WKH &RQVWDDFH \$XVWLQ  
:RPHQV +H DUW 5HVHDFK )HOORZVKLSV &HGDUV 6LQDL 0HGLFDO &HQWHU  
/RV \$QJHOHV &DOLIRUQLD WKH %DUEUD 6WUHLVDQG :RPHQV &DUGLRYDVFXODU  
5HVHDFK DQG (GXFDWLRQ 3URJUDP &HGDUV 6LQDL 0HGLFDO &HQWHU /RV  
\$QJHOHV 6RFLHW\ IRU :RPHQV +HDWK 5HVHDFK 6:+5  
:DVKLQJWRQH /LQGD -R\ 3ROOLQ :RPHQV +H DUW +HDWK  
3URJUDP DQG WKH (ULND \*ODJHU :RPHQV +H DUW +HDWK 3URMHFW &HGDUV  
6LQDL 0HGLFDO &HQWHU /RV \$QJHOHV &DOLIRUQLD

5HIHUFHV

%HQMDPLQ (- %ODKD 0- &KLXYH 6( &XVKPDQ 0 'DV 65 HW DO  
+H DUW GLVHDVH DQG VWURNH VWDWLWLVFV XSGDWH \$ UHSRUW IURP WKH  
\$PHULFDQ KH DUW DVVRFDWLRQ &LUFXODWLRQ H H  
:LOPRW .\$ 2 )ODKHUW\ 0 &DSHZHO 6 )RUG (6 9DFFDULQR 9  
&RURQDU\ KH DUW GLVHDVH PRUWDOLW\ GHFOLQHV LQ WKH 8QLWHG 6WDWHV IURP  
WKURXJK (YLGHQFH IRU VWDJQDWLRQ LQ \RXQJ DGXOWV HVSHFLDOO\ ZRPHQ  
&LUFXODWLRQ

&LWDW50QLQHQL 7 0HUJ &1%  
+HDOWK 1XU/R

7KH &XUUHQW \$ZDUHQHV DQG .QRZOHGJH RI WKH ,PSDF

ORVFD -RQHV :. .LQJ .%HG&DQJ 3 \$ZDUHQHVRVFD /LQIDQWH \$+ %HQMDPLQ (- %HUUD .  
SHUFHSWLRQ DQG NQRZOHGJH RI KHDUW GLVWJG\HRULSK\VLGDSUDBYZBQWQRQVDBBQJDKH  
ZRPHQ LQ WKH 8QLWHG 6WDWHV \$PHULFDQSKUH\HQWLRQRFXDWHLQDQZRPHQUFKODWWRQ  
GLVHVVH DQG VWURNH FDPDLJQ WDVN IRUFH\$UH\))&P QHG HUVHQ + 6SUDJXH ( %XU  
ORVFD+DPPRQG \* 0RFKDUL7RZHJHSHQEHUW 0\$QRZOHGJH DWLWXGHV DQG EHOLHIV UHJ  
)LVHHQWHUHQGV LQ DZDUHQHV RI KHDUWZRPHQLZRPHQV\KZRPMDOOLDQFH - \$P &RO  
5HVXOWV RI D \$PHULFDQ KHDUW DVVRFLDWLRQ QDWLRQDO VXUYH\ &LUFXODWLRQ

ORVFD 0RFKDUL + &KULVWLDQ \$ %HUUD . 7DXEHUW . 1DWLRQDO  
VWXG\ RI ZRPHQ V DZDUHQHV SUHYHQWLYH DFWLRQ DQG EDUULHUV WR  
FDUGLRYDVFXODU KHDOWK &LUFXODWLRQ